

Setting the bar for the competition.



Black Anodized SOCKETLESS™ Hose Fittings

Eaton's AQP SOCKETLESS Performance Hose and Fittings are extremely easy to work with. Connecting the two is a snap since not even a wrench is needed! Simply slip the hose onto the fittings. It's that simple. Also available in electroless nickel plating or red/blue anodized finish.

Features

- Cap is anodized aluminum, not plastic
- Unique 3-barb fitting in –10 and –12 sizes
- –06 and –08 feature 2 barbs
- Easy to assemble, no wrench required.
 - · No clamp needed.
 - · Reusable.

624 Firesleeve

- · One-piece design.
 - Allows for improved flow.
 - Eliminates two potential leak points (brazed joints).



Benefits

- · Lightweight and economical.
- Soaking or warming hose is not necessary.
- No additional band clamps are necessary

Applications

- · Gasoline, fuel and lubricating oils.
- · Air and water.

See page 11



624 Firesleeve is a silicone-coated, braided-glass sleeving manufactured using a unique proprietary process. The durable rubber finish resists tears and abrasion in addition to providing a reliable, no-slip clamping surface. Firesleeve hose flame shield can prevent or delay hose lines from burning. See hose specifications shown in this catalog for the correct firesleeve to match each hose size. For other hose styles, select firesleeve with an I.D. slightly larger than the hose O.D.

Features

- Ease of installation: 624 Firesleeve can be slid over line or cable before, during, or after construction or during a line or cable replacement
- Standard sizes available: .31 inch to 3.75 inches ID.

Benefits

- Protection of lines that carry hot or volatile fluids
- Protection of lines, cable, and pipe in hostile environments where there is:
- Exposure to excessive vibration friction
- Exposure to molten steel
- Exposure to industrial solvents
- Exposure to temperature extremes





See page 37

ET1000 — Portable Crimp Machine

Relaunched with a sleek new housing, the new high performance crimper will compliment your high performance shop, race trailer, or garage.

Features

- Pusher slides out of position.
- Red power coated housing protects user from moving machinery and providesx a sleek, aerodynamic design
- Crimper body has a clear zinc finish to protect against corrosion.
- Utilizes 2-piece collet assemblies.
- · Spacer rings control the crimp diameter.
- Qualified to crimp Aeroquip's top selling hoses: AQP Stainless Braid, StartLite, and Teflon hoses with Aeroquip'a qualified aluminum crimp fittings.

Benefits

 Sliding pusher allows for easier fitting insertion into the machine.

 Simple positive-stop crimp diameter control system for consistent crimping time after time with no operator adjustments required.

Easily transported between job sites.

 Versatile power source options.
 Electricity is required only when using an electric style pump.



See page 42



Table of Contents

Application Guide	3
AQP® and StartLite® Racing Hose and Fittings	6
AQP®SOCKETLESS™ Hose and Fittings	11
A/C Hose and Fittings	13
Racing Hose, Teflon* and Fittings	15
Pre-Made Off-Road Brakelines and Power Trim Assemblies	17
High Pressure (Power Steering) Hose and Fittings	18
Adapters	19
Fuel System Components	31
Couplings	35
Accessories	37
Assembly Equipment	
Assembly Instructions	44
Technical Data	49
Plan-O-Grams	56
Part Number Index	57

Warning

Eaton fitting tolerances are engineered to match Eaton hose tolerances. The use of Eaton fittings on hose supplied by other manufacturers and/ or the use of Eaton hose with fittings supplied by other manufacturers may result in the production of unreliable and unsafe hose assemblies and is neither recommended or authorized by Eaton. EATON SHALL NOT BE SUBJECT TO AND DISCLAIMS ANY **OBLIGATION OR**

LIABILITIES (INCLUDING **BUT NOT LIMITED TO** ALL CONSEQUENTIAL, INCIDENTAL AND **CONTINGENT DAMAGES)** ARISING OUT OF **BREACH OF CONTRACT** OR OF WARRANTY OR ARISING FROM TORT **CLAIMS (INCLUDING** WITHOUT LIMITATION **NEGLIGENCE AND** STRICT LIABILITY) OR OTHER THEORIES OF LAW WITH RESPECT TO ANY HOSE ASSEMBLIES NOT PRODUCED FROM GENUINE EATON APPROVED EQUIPMENT,

AND IN CONFORMANCE WITH EATON PROCESS AND PRODUCT INSTRUCTIONS FOR EACH SPECIFIC HOSE ASSEMBLY.

Failure to follow Eaton process and product instructions and limitations could lead to premature hose assembly failures resulting in property damage, serious injury or death.

Note: Part numbers in this bulletin are not certified or recommended for aircraft applications.



^{*}Teflon is a registered trademark of DuPont and under license by Eaton.

AQP® Racing Hose



- Aeroquip Performance Product's most popular racing hose
- Stainless Steel outer cover for excellent abrasion resistance
- Excellent pressure rating (1000 psi -04 to -12)
- AQP elastomer smooth bore inner tube
- -45°F to +300°F temperature rating
- Approved with reusable and crimp fittings
- Full vacuum sizes,
 -10, -12, and -16

 Applications: fuel, lube, coolant and air lines

See page 6

StartLite® Racing Hose



- Aeroquip Performance Product's popular lightweight racing hose
- Up to 45% lighter than stainless steel braided hose
- 350-500 psi pressure ratings
- Flame retardant Nomex* cover with Kevlar*
- AQP elastomer smooth bore inner tube
- -45°F to +300°F temperature rating
- Approved with reusable and lightweight crimp fittings

Applications: fuel, lube, coolant and air

lines

See page 6

AQP° SOCKETLESS™ Racing Hose



- Easy to assemble with reusable SOCKETLESS fittings
- Textile braid reinforcement available in a blue or black AQP elastomer cover
- AQP elastomer smooth bore inner tube
- -45°F to +300°F temperature rating
- Available in sizes blue -04 to -12; black -06 to -12
- Vacuum rated up to 28 in. Hg. in sizes -04 to -08
- Operating pressure for all sizes at 250 psi
- · Never needs a clamp

Applications: fuel lube coolant

fuel, lube, coolant and air lines

See page 11

A/C Hose



- Stainless steel braided for a professional and custom look
- Nylon inner tube for superior refrigerant performance
- Extensively lab and field tested with R134a refrigerants
- Specifically designed for use with our A/C fittings to provide a superior performing combination
- Applications: air conditioning lines

See page 13

Racing Hose, Teflon* (Off-Road Brake and Power Trim Lines)



- Superior fluid compatibility, abrasion and corrosion resistance for reliable service
- Stainless steel outer cover for excellent abrasion resistance
- Extruded Teflon* smooth bore inner tube
- -100°F to +450°F temperature rating
- Approved with reusable and crimp fittings
- Excellent pressure rating (2500 psi in dash -06)
- Applications:

off road brake, transmission, clutch, gauge, N₂O, power steering, hydraulic, air conditioning

See page 15

AQP® High Pressure Hose (Power Steering)



- Your best choice for high pressure applications
- Excellent pressure rating (2250 psi in dash -06)
- Abrasion resistant fabric cover
- AQP elastomer smooth bore inner tube
- -45°F to +300°F temperature rating
- Approved with reusable steel fittings
- Applications:

power steering, hydraulics, fuel, lube, coolant, air tools and DOT approved air brakes

See page 18

*Nomex, Kevlar and Teflon are DuPont trademarks and under license by Eaton.



Reusable Aluminum Fittings



- One-piece design
 - · Allows for improved flow
 - Eliminates two potential leak points (brazed joints)
 - Significantly improved appearance
- Electroless nickel plating, red/blue and black anodized
- Swivel and non-swivel styles available
- Designed to be re-used without damage to the fitting
- Easier to install than cutter style, more user friendly. See page 50 for details
- Nipple pilot prevents damage to the inner tube

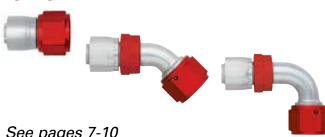
- No seal is broken between nipple and tube when swiveled due to nipple design; ensuring integrity of the seal
- Compression style specially designed for performance applications
- Wide range of applications

Approved hose styles

- AQP® Stainless Steel Racing Hose
- StartLite® Racing Hose

See pages 7-10

Crimp Aluminum Fittings (lightweight)



- Lightweight and easy to use design
- One-piece design
 - · Allows for improved flow
 - · Available in swivel and non-swivel
 - · Eliminates two leak points (brazed joints)
 - · Significantly improved appearance
- Assembled with ProCrimp® crimp machines

Approved hose styles

- AQP® Stainless Steel Racing Hose
- StartLite® Racing Hose

See pages 7-10

Aluminum SOCKETLESS™ Fittings



- Used with AQP SOCKETLESS hose
- Easy to assemble, no wrench required
 - · No clamp needed
 - Reusable
- One-piece design
 - · Allows for improved flow
- Eliminates two potential leak points (brazed joints)
- Significantly improved appearance
- Electroless nickel plating or red/blue anodized finish

Approved hose styles

• AQP® SOCKETLESS Racing Hose

See page 12

A/C Fittings



- Nickel plated for an eyeappealing look and corrosion resistance
- Reusable to allow you to make your own assemblies
- Available refrigerant charge ports to allow you to position the ports where you want them
- Female O-ring pilot terminal ends fit perfectly with the majority of A/C components
- O-ring ferrule ensures a superior seal when assembled with our A/C hose

Approved hose styles

A/C Racing Hose

See page 14

Bulk or Retail Packaged Parts

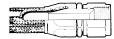
FB-prefixed part numbers indicate bulk-packaged products. FC-prefixed part numbers indicate carded/clam shelled (retail-packaged) products. Most products in this catalog can be ordered in either package style by changing the prefix accordingly.

Compression-Style Design Provides Simple, Troublefree Assembly

Eaton's Aeroquip
Performance Products
anodized aluminum
reusable fittings are
engineered to match
Eaton hose tolerances,
providing matchless
performance. The
smooth tube design
allows excellent fluid
flow. Their compressionstyle design provides
simple, troublefree
assembly.

Eaton's compression style design was specially designed for performance applications. They are reliable, easier to use and more forgiving than cutter-style fittings. A comparison of the two styles is shown at right. For applications involving methanol and nitromethane fuel mixtures, Aeroquip offers zinc-plated carbon steel fittings designed precisely for these situations. These fittings feature a steel nipple, nut and tube with an anodized aluminum hose socket. High quality aluminum carburetor adapters and banjo fittings are also available. Stainless steel

Eaton's Compression Style Design

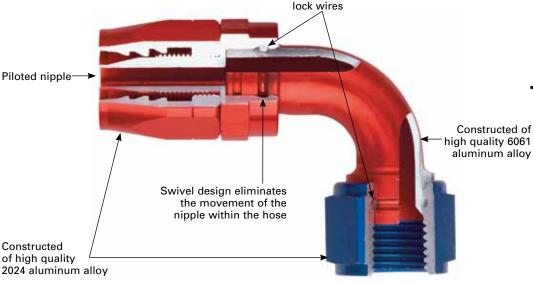


- Designed to be re-used without damage to the fitting
- Nipple pilot prevents damage to the inner tube
- More user friendly, for consistently excellent hose/fitting connections
- Nipple does not move with this design on swivel fittings

Competition's Cutter Style Design

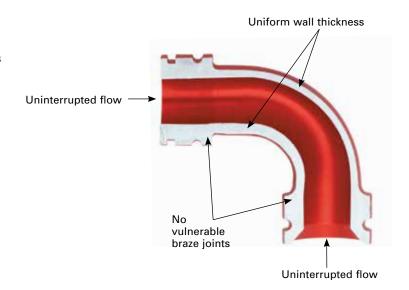


- Cutting edge dulls with each use, which can cause an incomplete connection.
- For re-use the inner tube must be removed from the lip seal area without damage to the cutter. A damaged or dull cutter can mean a leaky fitting.
- Excessive lube oil applied during installation can cause hydraulic lock in the lip seal area, preventing complete fitting connection.
- When used with swivel style fittings, the nipple moves inside the hose, disrupting the integrity of this critical seal.



One-Piece Design*

- · Allows for improved flow
- Eliminates two leak points (brazed joints)
- Significantly improved appearance



*Available in the majority of Aeroquip Performance Products aluminum fittings. Contact Eaton for additional information.



AQP® RACING HOSE AND FITTINGS STARTLITE® RACING HOSE AND FITTINGS

AOP® RACING HOSE

The most popular racing hose in the market for over 60 years — made in the U.S.A.



Great Looks, Proven Performance.

Stainless steel braid for superior performance.

AQP Racing Hose is compatible with petroleum and synthetic lubricants, hydrocarbon fuels and liquid engine coolants. It operates at higher temperatures for longer periods. Light and flexible, it is easy to work with, and its stainless steel cover will ensure long-

lasting durability. AQP Racing Hose also features an AQP elastomer inner tube that is resistant to oxidation, the effects of ozone and other various agents present in the air. Changes in physical properties due to shelf aging are nonexistent.

Applications:

Fuel, lube, coolant, air

HOSE SPECIFICATIONS

ORDERING INFORMATION

	0	\bigcirc	\bigcirc	\bigcirc		\odot									
Hose Dash	Hose	Max. Hose	Max. Operating	Weight Bend	Per	Vacuum	Bulk Part								
Size	I.D.	0.D.	Pressure	Radius	Foot	Service	Number	Package	Length F	art Numb	er				
	INCHES	INCHES	PSI	INCHES	POUNDS	INCHES/H	HG	2 FEET	3 FEET	6 FEET	10 FEET	15 FEET	20 FEET	50 FEET	REEL
-04	.22	.44	1000/750 ¹	2.00	.11	21	FBA0400	_	FCA0403	FCA0406	FCA0410	FCA0415	FCA0420	FCA0450	FBA0400RL
-06	.34	.55	1000/7501	2.50	.16	21	FBA0600	_	FCA0603	FCA0606	FCA0610	FCA0615	FCA0620	FCA0650	FBA0600RL
-08	.44	.65	1000/7501	3.50	.17	21	FBA0800	_	FCA0803	FCA0806	FCA0810	FCA0815	FCA0820	FCA0850	FBA0800RL
-10	.56	.80	1000/750 ¹	4.00	.21	28	FBA1000	_	FCA1003	FCA1006	FCA1010	FCA1015	FCA1020	FCA1050	FBA1000RL
-12	.69	.94	1000/7501	4.50	.29	28	FBA1200	_	FCA1203	FCA1206	FCA1210	FCA1215	FCA1220	FCA1250	FBA1200RL
-16	.88	1.15	750/7501	5.50	.38	28	FBA1600	_	FCA1603	FCA1606	FCA1610	FCA1615	FCA1620	FCA1650	FBA1600RL
-20	1.13	1.41	500	8.00	.49	21	FBA2000	_	FCA2003	FCA2006	FCA2010	FCA2015	FCA2020	_	_
-24	1.34	1.70	50	9.00	.80	21	FBA2400	FCA2402	FCA2403	FCA2406	_	_	_	_	_
-32	1.75	2.09	50	12.50	.98	15	FBA3200	FCA3202	FCA3203	FCA3206	_	_	_	_	_

Construction: AQP elastomer inner tube, partial stainless steel wire inner braid and a full stainless steel outer braid reinforcement.

Temperature Range: Continuous operating temperature from -55°F to +300°F (-49°C to +150°C). See Page 31 for banjo fitting for fuel systems.

STARTLITE® RACING HOSE

The lightweight alternative — 45% lighter than AQP Racing Hose — made in the U.S.A.



The Professional's Choice.

Features:

- Up to 45% lighter than stainless steel braided hose
- Flame retardant Nomex and Kevlar cover
- · AQP smooth bore inner tube
- -45° to 300°F temperature rating
- · Flexible band radius
- Race proven approved by NASCAR, NHRA, IHRA, ADRL and other sanctioning bodies
- Three to five times better abrasion protection*
- Fastest and easiest crimp machine on the market (FT1380)
- Non-swivel and swivel crimp fittings (no phase angles to calculate)
- Rated to 20 in/Hg or 28 in/Hg with stainless steel support coil

Applications:

• Fuel, lube, coolant and air lines

HOSE SPECIFICATIONS

ORDERING INFORMATION

		\bigcirc	\bigcirc	\mathcal{O}		Θ							
Hose Dash Size		Hose O.D.	Max. Operating Pressure	Min. Bend Radius	Weight Per Foot	Vacuum Service	Bulk Part Number	Package	Length Par	t Number			
	INCHES	INCHES	PSI	INCHES	POUNDS	INCHES/H	IG	3 FEET	6 FEET	10 FEET	15 FEET	20 FEET	50 FEET
-04	.22	.43	500	2.00	.05	20	FBU0400	FCU0403	FCU0406	FCU0410	FCU0415	FCU0420	FCU0450
-06	.34	.55	500	2.50	.08	20	FBU0600	FCU0603	FCU0606	FCU0610	FCU0615	FCU0620	FCU0650
-08	.44	.64	500	3.50	.09	20	FBU0800	FCU0803	FCU0806	FCU0810	FCU0815	FCU0820	FCU0850
-10	.56	.80	500	4.00	.14	20	FBU1000	FCU1003	FCU1006	FCU1010	FCU1015	FCU1020	FCU1050
-12	.69	.93	350	4.50	.16	20	FBU1200	FCU1203	FCU1206	FCU1210	FCU1215	FCU1220	FCU1250
-16	.88	1.15	350	5.50	.19	20	FBU1600	FCU1603	FCU1606	FCU1610	FCU1615	FCU1620	FCU1650
-20	1.13	1.41	350	5.50	.25	20	FBU2000	FCU2003	FCU2006	FCU2010	FCU2015	FCU2020	FCU2050
_					1 B 1 V							S D 11 1 1	

Construction: AQP elastomer inner tube and Nomex* hose construction. **Temperature Range**: -45°F to +300°F (-43°C to +150°C).

For ultimate weight savings, select AQP lightweight crimp fittings.

AQP® Racing and Startlite® Racing Hoses are both qualified with the same reusable and crimp fittings on the following pages.

Please see Pages 44-48 for assembly instructions. *Nomex is a Dupont trademark.

Bulk or Retail Packaged Parts

FB- prefixed part numbers indicate bulk-packaged products. FC-prefixed part numbers indicate carded/clam shelled (retail-packaged) products. Most products in this catalog can be ordered in either package style by changing the prefix accordingly.



FCM1017

Size

-06

-08 -10 -12

-20

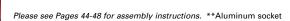
STRAIGHT FITTING

Reusable Black Anodized Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Red/Blue Anodized Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable** Steel Swivel S.A.E. 37° (JIC/AN)	Aluminum Nickel-Plated Swivel S.A.E. 37° (JIC/AN)	Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)
				-
Packaged Part Number	Packaged Part Number	Packaged Part Number	Bulk Part Number	Bulk Part Number
_	_	FCM1011	_	FBM4211
FCM4412	FCM1012	FCM1075	FCE1012	FBM4212
FCM4413	FCM1013	FCM1076	FCE1013	FBM4213
FCM4414	FCM1014	_	FCE1014	FBM4214
FCM4415	FCM1015	_	FCE1015	FBM4215
FCM4416	FCM1016	_	_	FBM4216

FBM4217

<u>30° ELBO</u>	W FITTING				
	Reusable Back Anodized Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Red/Blue Anodized Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Red/Blue Anodized Aluminum Non-Swivel S.A.E. 37° (JIC/AN)	Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)	Lightweight Crimp Non-Swivel S.A.E. 37° (JIC/AN)
Hose Size	Packaged Part Number	Packaged Part Number	Packaged Part Number	Bulk Part Number	Bulk Part Number
-06	FCM4472	FCM4072	_	FBM4272	_
-08	FCM4473	FCM4073	_	FBM4273	_
-10	FCM4474	FCM4074	_	FBM4274	FBM4174
-12	FCM4475	FCM4075	_	FBM4275	FBM4175
-16	FCM4476	FCM4076	_		
-20	_	_	FCM1147	_	_







Don't Put Your Performance at Risk

Don't mix and match hose and fitting manufactures with your hose assemblies. Each manufacturer of hose and fittings builds their product to specific tolerances and does not recommend them for use with other brands. Doing this puts your performance at risk and voids any warranty on your product.

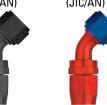




AQP® RACING HOSE AND FITTINGS (CONT.) STARTLITE® RACING HOSE AND FITTINGS (CONT.)

45° ELBOW FITTING

Reusable Black Anodized Aluminum Swivel S.A.E. 37° (JIC/AN)









Lightweight

Crimp Non-Swivel S.A.E. 37° (JIC/AN)





Lightweight Crimp Non-Swivel S.A.E. 37° (JIC/AN)





Hose Size	Packaged Part Number	Bulk Part Number	Bulk Part Number				
-04	_	_	_	FCM1021	_	_	FBM4121
-06	FCM4422	FCM4022	FCM1022	FCM1079	FCE4022	FBM4222	_
-08	FCM4423	FCM4023	FCM1023	FCM1080	FCE4023	FBM4223	_
-10	FCM4424	FCM4024	FCM1024	_	FCE4024	FBM4224	FBM4124
-12	FCM4425	FCM4025	FCM1025	_	FCE4025	FBM4225	FBM4125
-16	FCM4426	FCM4026	FCM1026	_	_	FBM4226	_
-20	_	_	FCM1027	_	_	_	FBM4127

60° ELBOW FITTING

Reusable **Black Anodized** Aluminum Swivel S.A.E. 37° (JIC/AN)



Part Number

FCM4482

FCM4483

FCM4484

FCM4485

FCM4486

1	
	A
1 5 1	
170	
4 2 5	

FCM4085

FCM4086

Reusable

Aluminum

Swivel

Red/Blue Anodized







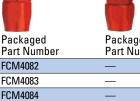
Reusable

Aluminum

Non-Swivel S.A.E. 37° (JIC/AN)

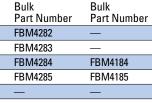
FCM1148













Weight Savings

Up to 12 lbs can be saved by using StartLite hose assemblies in lieu of a stainless steel braided hose assemblies on the average circle track car.

Direct Port Fitting

Hose

Size -06

-08

-10

-12

-16

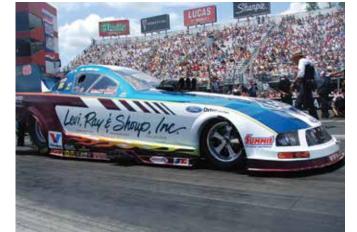
-20

45° ORB FITTING

Reuseable Aluminum Swivel O-ring



Hose Size	Bulk Part Number	Thread Size
-08	FBM1348	9/16-18
-08	FBM1349	3/4-16
-10	FBM1350	1 1/16-12
-10	FBM1351	7/8-14
-12	FBM1352	7/8-14
-12	FBM1353	1 1/16-12



Please see Pages 44-48 for assembly instructions. **Aluminum socket

Bulk or Retail Packaged Parts

FB-prefixed part numbers indicate bulk-packaged products. FC-prefixed part numbers indicate carded/clam shelled (retail-packaged) products. Most products in this catalog can be ordered in either package style by changing the prefix accordingly.



AQP® RACING HOSE AND FITTINGS (CONT.) STARTLITE® RACING HOSE AND FITTINGS (CONT.)

90° ELBOW FITTING

Reusable Black Anodized Aluminum Swivel S.A.E. 37° (JIC/AN)







Aluminum Nickel-Plated Swivel S.A.E. 37° (JIC/AN)

Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)

Lightweight Crimp Non-Swivel S.A.E. 37° (JIC/AN)





Reusable

Aluminum

Swivel

Red/Blue Anodized











Hose Size	Packaged Part Number	Bulk Part Number	Bulk Part Number				
-04	_	_	_	FCM1031	_	_	FBM4131
-06	FCM4432	FCM4032	FCM1032	FCM1083	FCE4032	FBM4232	_
-08	FCM4433	FCM4033	FCM1033	FCM1084	FCE4033	FBM4233	_
-10	FCM4434	FCM4034	FCM1034	_	FCE4034	FBM4234	FBM4134
-12	FCM4435	FCM4035	FCM1035	_	FCE4035	FBM4235	FBM4135
-16	FCM4436	FCM4036	FCM1036	_	_	FBM4236	_
-20	_	_	FCM1037	_	_	_	FBM4137

120° ELBOW FITTING

Reusable **Black Anodized** Aluminum Swivel S.A.E. 37° (JIC/AN)

















Hose Size	Packaged Part Number	Packaged Part Number	Packaged Part Number	Bulk Part Number	Bulk Part Number
-04	_	_	_	_	FBM4141
-06	FCM4442	FCM4042	FCM1042	FBM4242	_
-08	FCM4443	FCM4043	FCM1043	FBM4243	_
-10	FCM4444	FCM4044	FCM1044	FBM4244	FBM4144
-12	FCM4445	FCM4045	FCM1045	FBM4245	FBM4145
-16	FCM4446	FCM4046	FCM1046	FBM4246	_
-20	_	_	FCM1047	_	_

Direct Port Fitting

90° MALE PIPE FITTING

Reusable Aluminum Swivel Male Pipe



Hose Size	Packaged Part Number	Pipe Thread Size
-06	FCM1343	3/8 NPTF
-08	FCM1344	1/2 NPTF
-12	FCM1345	3/4 NPTF

Direct Port Fitting

90° ORB FITTING

Reuseable Aluminum Swivel O-



J-ring		
Hose Size	Bulk Part Number	Thread Size
-08	FBM1355	9/16-18
-08	FBM1356	3/4-16
-10	FBM1357	1 1/16-12
-10	FBM1358	7/8-14
-12	FBM1359	7/8-14
-12	FBM1360	1 1/16-12

Please see Pages 44-48 for assembly instructions. **Aluminum socket





150° ELBOW FITTING

Reusable Black Anodized Aluminum Swivel S.A.E. 37° (JIC/AN)





Lightweight Crimp Swivel S.A.E. 37° (JIC/AN))









Hose Size	Packaged Part Number	Packaged Part Number	Packaged Part Number	Bulk Part Number
-04	_	_	_	FBM4151 ¹
-06	FCM4452	FCM4052	FCM1052	FBM4252
-08	FCM4453	FCM4053	FCM1053	FBM4253
-10	FCM4454	FCM4054	FCM1054	FBM4254
-12	FCM4455	FCM4055	FCM1055	FBM4255
-16	FCM4456	FCM4056	FCM1056	FBM4256

180° ELBOW FITTING

Reusable Black Anodized Aluminum Swivel S.A.E. 37° (JIC/AN) Reusable Red/Blue Anodized Aluminum Swivel S.A.E. 37° (JIC/AN)

Reusable Red/Blue Anodized Aluminum Non-Swivel S.A.E. 37° (JIC/AN)

Lightweight Crimp Swivel S.A.Ė. 37° (JIC/AN))











Hose Size	Packaged Part Number	Packaged Part Number	Packaged Part Number	Bulk Part Number
-06	FCM4462	FCM4062	FCM1062	_
-08	FCM4463	FCM4063	FCM1063	FBM4263
-10	FCM4464	FCM4064	FCM1064	FBM4264
-12	FCM4465	FCM4065	FCM1065	FBM4265
-16	FCM4466	FCM4066	FCM1028	FBM4266





Routing Made Easy with Swivel Design

Many hose assemblies require angled fittings on both ends to make a connection. Our angled fittings all have a swivel option that eliminates the need to calculate phase angles when attaching the ends and makes installation easier.

Please see Pages 44-48 for assembly instructions.

Bulk or Retail Packaged Parts

FB-prefixed part numbers indicate bulk-packaged products. FC-prefixed part numbers indicate carded/clam shelled (retail-packaged) products. Most products in this catalog can be ordered in either package style by changing the prefix accordingly.

AQP° SOCKETLESS™ HOSE

The fastest and easiest to assemble.



A Lightweight and Economical Choice

Quick and easy assembly that can save you time.

Eaton's AQP SOCKETLESS Performance Hose and Fittings are extremely easy to work with. Connecting the two is a snap since not even a wrench is needed! Simply slip the hose onto the fittings. It's that simple.

Applications:

Gasoline, fuel and lubricating oils, air and water.

HOSE SPECIFICATIONS

ORDERING INFORMATION

	0	\bigcirc	\bigcirc	\bigcirc	Θ							
Hose Dash	Hose	Hose	Max. Operating	Min. Bend	Vacuum							
Size	I.D.	0.D.	Pressure	Radius	Service*	Bulk Part	Number	Package	Length Par	rt Number		
						Blue	Black	Blue	Black	Blue	Black	
	INCHES	INCHES	PSI	INCHES	INCHES/HG			15 FEET	15 FEET	20 FEET	20 FEET	REEL
-04	.25	.49	250	3.00	28	FBV0400	_	_	_	_	_	_
-06	.38	.62	250	3.00	28	FBV0600	FBN0600	FCV0615	FCN0615	FCV0620	FCN0620	FBV0600RL ¹
-08	.50	.75	250	5.00	28	FBV0800	FBN0800	FCV0815	FCN0815	FCV0820	FCN0820	FBV0800RL ²
-10	.63	.91	250	6.00	18	FBV1000	FBN1000	FCV1015	FCN1015	FCV1020	FCN1020	_
-12	.75	1.03	250	7.00	18	FBV1200	FBN1200	FCV1215	FCN1215	FCV1220	FCN1220	_

Construction: AQP elastomer inner tube, textile braid reinforcement, AQP elastomer cover.

Temperature Range: -40°F to +300°F (-40°C to +150°C). Air not to exceed +250°F (+121°C) and water not to exceed +180°F (+82°C).

¹Order in 560-foot increments.

²Order in 600-foot increments.

Features:

- · Easy to assemble and disassemble
- · No socket wrench required
- Lightweight

- Reusable
- · Operating pressure for all sizes at 250 psi
- Never uses a clamp

STRAIGHT FITTING

		SOCKETLESS Black Anodized Aluminum S.A.E. 37° (JIC/	-	SOCKETLESS Red/Blue Anodized Aluminum S.A.E. 37° (JIC/AN)	SOCKETLESS Nickel-Plated Aluminum S.A.E. 37° (JIC/AN)	SOCKETLESS Brass Male Pipe		SOCKETLESS Brass Male Flare S.A.E. 37° (JIC/AN)	SOCKETLESS Brass Swivel S.A.E. 37° (JIC/AN)	SOCKETLESS Brass Male Inverted Flare
									Pipe	
ŀ	Hose	Bulk	Packaged	Packaged	Packaged	Bulk Part	Thread	Bulk	Bulk	Bulk
5	Size	Part Number	Part Number	Part Number	Part Number	Number	Size	Part Number	Part Number	Part Number
	04	_	_	_	_	FBM1200 FBM1201	1/8 1/4	FBM1444	FBM1231*	FBM1211
-	06	FBL1512	FCL1512	FCM1512	FCE1512	FBM1207 FBM1202	1/4 3/8	FBM1445	FBM1222	FBM1212
	-08	FBL1513	FCL1513	FCM1513	FCE1513	FBM1206 FBM1203	3/8 1/2	_	FBM1233*	FBM1213
	10	FBL1514	FCL1514	FCM1514	FCE1514	FBM1204	1/2	_	FBM1234*	FBM1214
	12	FBL1515	FCL1515	FCM1515	FCE1515	FBM1205	3/4	_	FBM1225	_

^{*}These fittings mate with both 37° and 45° male flares.

AQP® SOCKETLESS™ hose is qualified with the SOCKETLESS fittings above and on the following page.





45° ELBOW FITTING

SOCKETLESS SOCKETLESS Black Anodized Red/Blue Anodized SOCKETLESS **SOCKETLESS** Nickel-Plated Aluminum Aluminum Steel Swivel Aluminum S.A.E. 37° (JIC/AN) S.A.E. 37° (JIC/AN) S.A.E. 37° (JIC/AN) S.A.E. 37° (JIC/AN) **Packaged Packaged** Bulk Hose Bulk Packaged Size Part Number Part Number Part Number Part Number Part Number -04 FBM1438 -06 FBL1522 FCL1522 FCM1522 FCE1522 FBM1439 -08 FCM1523 FBM1440 FBL1523 FCL1523 FCE1523 -10 FBL1524 FCL1524 FCM1524 FCE1524 -12 FCM1525 FBL1524 FCL1524 FCE1525

9

90° E	90° ELBOW FITTING							
	SOCKETLESS Black Anodized Aluminum S.A.E. 37° (JIC/A	N)	SOCKETLESS Red/Blue Anodized Aluminum S.A.E. 37° (JIC/AN)	SOCKETLESS Nickel-Plated Aluminum S.A.E. 37° (JIC/AN)	SOCKETLESS Steel Swivel S.A.E. 37° (JIC/AN)			
Hose	Bulk	Packaged	Packaged	Packaged	Bulk			
Size	Part Number	Part Number	Part Number	Part Number	Part Number			
-04	_	_	_	_	FBM1441			
-06	FBL1532	FCL1532	FCM1532	FCE1532	FBM1442			
-08	FBL1533	FCL1533	FCM1533	FCE1533	FBM1443			
-10	FBL1534	FCL1534	FCM1534	FCE1534				
-12	FBL1534	FCL1534	FCM1535	FCE1535	_			

120° ELBOW FITTING

SOCKETLESS SOCKETLESS Black Anodized Red/Blue Anodized Aluminum Aluminum S.A.E. 37° (JIC/AN) S.A.E. 37° (JIC/AN)



Hose Size	Bulk Part Number	Packaged Part Number	Packaged Part Number
-06	FBL1542	FCL1542	FCM1542
-08	FBL1543	FCL1543	FCM1543
-10	FBL1544	FCL1544	FCM1544
-12	FBL1545	FCL1545	FCM1545

180° ELBOW FITTING

SOCKETLESS SOCKETLESS **Black Anodized** Red/Blue Anodized Aluminum Aluminum S.A.E. 37° (JIC/AN) S.A.E. 37° (JIC/AN)



Hose	Bulk	Packaged	Packaged
Size	Part Number	Part Number	Part Number
-06	FBL1562	FCL1562	FCM1562
-08	FBL1563	FCL1563	FCM1563
-10	FBL1564	FCL1564	FCM1564
-12	FBL1565	FCL1565	FCM1565

150° ELBOW FITTING

SOCKETLESS **SOCKETLESS** Black Anodized Red/Blue Anodized Aluminum Aluminum S.A.F. 37° (JIC/AN) S.A.E. 37° (JIC/AN) Packaged Hose Bulk Packaged Part Number Part Number Size Part Number FBL1552 FCL1552 FCM1552 FBL1553 FCL1553 FCM1553 FBL1554 FCL1554 FCM1554 FBL1555 FCL1555 FCM1555

STRAIGHT -08 TO -061

FBM1232

-06

-08

-10

Hose

Size

-06

SOCKETLESS Brass Female Flare Bulk Thread Part Size Number

3/4-16

Please see Pages 44-48 for assembly instructions. ¹These fittings mate with both 37° and 45° male flares.

Bulk or Retail Packaged Parts

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A/C HOSE AND FITTINGS

Custom look and superior performance



Even Our A/C Lines Look Cool.

Specifically designed for your A/C component applications.

This new and innovative product offers discriminating motorsport enthusiasts a superior hose and fitting combination specifically designed for A/C component applications. This attractive hose has a stainless steel outerbraid with a nylon inner tube for supe-

rior refrigerant performance. Custom designed nickel plated steel reusable fittings, with available charge ports, are an eye appealing compliment to complete these field serviceable hose assemblies.

Applications: Air conditioning

HOSE SPECIFICATIONS

ORDERING INFORMATION

	9	\bigcirc	\bigcirc		(I)		
Hose			Maximum	Minimum		Bulk	
Dash	Hose	Hose	Operating	Bend	Weight	Part	
Size	I.D.	0.D.	Pressure	Radius	Per Foot	Number	Package Length Part Number
	INCHES	INCHES	PSI	INCHES	POUNDS		3 FEET 6 FEET 9 FEET
-06	.33	.44	500	4.00	.08	FBF0600	FCF0603 FCF0606 FCF0609
-08	.43	.54	500	5.25	.10	FBF0800	FCF0803 FCF0806 FCF0809
-10	.51	.63	500	6.50	.14	FBF1000	FCF1003 FCF1006 FCF1009

Temperature Range: -40°F to +250°F (-40°C to +121°C).



Lubricant Selection

Always be sure to use the correct system lubricant for your A/C system. Most R-12 systems use mineral oil, while most R-134a systems use a synthetic lubricant called Polyalkylene Glycol (PAG).

Look As Cool As You Feel.

Your street rod is "cool" because of your demanding attention to detail. And although perfection is your goal, up until now you have been forced to accept industriallooking A/C hose & fittings, or worse yet, stainless steel braided versions that didn't work.

Eaton's Aeroquip Performance Products has responded to your endless pursuit of detail and perfection with the development of an A/C hose & fitting product designed specifically for street rod A/C components, and your impeccable standards.

Features:

- Superior appearance with stainless steel covered hose available in sizes -6, -8, and -10
- Nylon tube for outstanding refrigerant performance
- · Nickel-plated steel reusable fittings, with reusable charge ports, offer field serviceability
- Female O-ring pilot terminal ends for precise connections with existing A/C components
- O-ring seal between the hose and fitting nipple increases fitting and hose assembly integrity
- Trusted Aeroquip Performance Product quality
- Extensively field and lab tested with R-134a refrigerant
- Reusable fittings allow you to make custom hose assemblies for your specific applications

A/C hose is qualified with the A/C fittings on the following page.

Please see Pages 44-48 for assembly instructions.





STRAIGHT FITTING

eusable Nickel- lated Steel emale O-ring Pilot	Reusable Nickel- Plated Steel Female O-ring Pilot w/ Charge Port



FCE1814 (Low Side)

Packaged Part Number
FCE1812 (High Side)
FCE1813 (High Side)

Reusable Nickel-Plated Steel Hose to Hose w/ Charge Port



Packaged Part Numbe	r
FCE1912	
FCE1913	
FCE1914	

45° FITTING

Reusable Nickel-Plated Steel Female O-ring Pilot



Hose Size	Packaged Part Number
-06	FCE1722
-08	FCE1723
-10	FCE1724

90° FITTING

Hose Size -06

-08

-10

Reusable Nickel
Plated Steel
Female 0-ring
Pilot

Packaged Part Number

FCE1712

FCE1713

FCE1714

Reusable Nickel-Plated Steel Female 0-ring Pilot with Charge Port



Hose Size	Packaged Part Number	Packaged Part Number
-06	FCE1732	FCE1832
-08	FCE1733	FCE1833
-10	FCE1734	FCE1834

135° FITTING

Reusable Nickel-Plated Steel Female 0-ring Pilot







Hose Size	Packaged Part Number	Packaged Part Number
-08	FCE1793	FCE1893
-10	FCE1794	FCE1894

REPLACEMENT BRASS SLEEVE*



Size	Part Number	Quantity
-06	FCM2430	6
-08	FCM2431	6
-10	FCM2432	6

^{*}The brass sleeves have a HNBR O-ring inside.

REPLACEMENT O-rings (HNBR)



Size	Part Number	Quantity
-06	FCM3416	6
-08	FCM3417	6
-10	FCM3418	6



Please see Pages 44-48 for assembly instructions.

Bulk or Retail Packaged Parts

RACING HOSE, TEFLON*

For the most extreme applications



Our Strongest, Most Compatible Hose.

Superior fluid compatibility, abrasion and corrosion resistance for reliable service.

Made with an extruded Teflon* inner tube that's compatible with a wide range of fluids, including hydraulic brake fluids. The hose has a bright stainless steel wire-braid cover

ORDERING INFORMATION

that resists abrasion and corrosion, providing optimum dependability.

Applications: Offroad brake, transmission, clutch, gauge, N₂O, power steering, hydraulic.

HOSE SPECIFICATIONS

	0		\bigcirc	\bigcirc	• • • • • • • • • • • • • • • • • • • 						
Hose Dash Size	Hose I.D.	Hose O.D.	Maximum Operating Pressure	Minimum Bend Radius	Vacuum Service	Bulk Part Number	Package I	_ength Part I	Number		
	INCHES	INCHES	PSI	INCHES	INCHES/HG		3 FEET	6 FEET	10 FEET	15 FEET	20 FEET
-03	.14	.25	3,000	1.50	28	FBC0300	FCC0303	FCC0306	FCC0310	FCC0315	FCC0320
-04	.19	.30	3,000	2.00	28	FBC0400	FCC0403	FCC0406	FCC0410	FCC0415	FCC0420
-06	.32	.43	2,500	4.00	28	FBC0600	FCC0603	FCC0606	FCC0610	FCC0615	FCC0620
-08	.42	.54	2,000	5.25	28	FBC0800	FCC0803	FCC0806	FCC0810	FCC0815	FCC0820

Construction: Extruded Teflon* inner tube with stainless steel wire-braid cover.

Temperature Range: -100°F to +450°F (-73°C to +232°C).

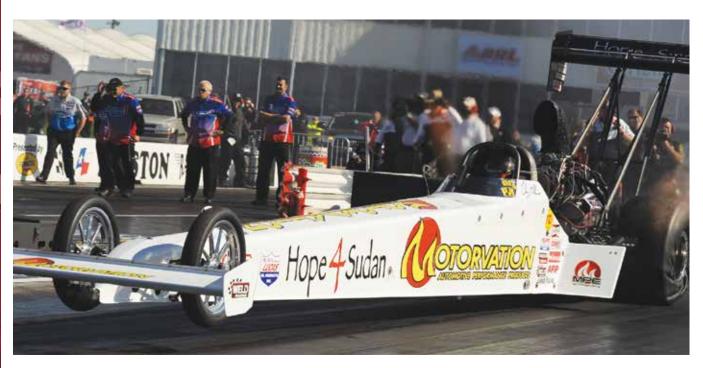


Hose Assembly

After cutting Teflon* and A/C hose, be sure to clean all burrs or debris from the end of the hose. This helps to ensure a secure and leak free seal between the tube and sleeve.

Features:

- · Unmatched strength and ultimate flexibility
- Functions smoothly at extreme temperatures
- · Withstands constant flexing and vibration
- · Resists fatigue and failure under high pressure
- · Carries fluids of all kinds without contamination



Teflon* hose is a registered trademark of Dupont and under license from Eaton..

Please see Pages 44-48 for assembly instructions.





STRAIGHT FITTING

	Reusable Steel Male Pipe1		Reusable Steel Swivel S.A.E. 37° (JIC/AN)1	Reusable Steel Swivel S.A.E. 45°	Reusable Ste Inverted Flare S.A.E. Male		Reusable Stainless Steel Swivel S.A.E. 37° (JIC/AN)	Steel Crimp S.A.E. 37° (JIC/AN)
							ESTE	
Hose Size	Packaged Part Number	Pipe Thread Size	Packaged Part Number	Packaged Part Number	Packaged Part Number	Fitting Size	Packaged Part Number	Bulk Part Number
-03	_	_	FCM1100	_	_	<u> </u>	FCM1130	FBM1124
-04	FCM3088 FCM3089	1/8 1/4	FCM1101	_	_	_	FCM1102	FBM1125
-06	_	_	FCM1103	FCM1134	FCM1137 FCM1138	-05 -06	_	_
-08	_	_	FCM1104	FCM1135	FCM1139	-08	_	_

STRAIGHT

Reusable Steel 10mm Banjo Packaged Part Number

17° ELBOW



45° ELBOW

FCM3091

Hose

Size

-03

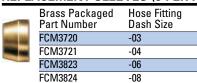
	Reusable Steel S.A.E. 37° (JIC/AN)	Reusable Steel S.A.E. 45°	Reusable Steel Inverted Flare S.A.E. Male		Inverted Flare		Forged Adjustable Reusable Stainless Steel Swivel S.A.E. 37° (JIC/AN)	Steel Crimp S.A.E. 37° (JIC/AN)
					The second			
Hose	Packaged	Packaged	Packaged	Fitting	Packaged	Bulk		
Size	Part Number	Part Number	Part Number	Size	Part Number	Part Number		
-03	FCM1110	_	_	_	FCM1140	FBM1126		
-04	FCM1111	_	_	_	FCM1146	FBM1127		
-06	FCM1112	FCM1114	FCM1155 FCM1141	-05 -06	_	_		
-08	FCM11131	FCM11131	FCM1142	-08	_	_		

90° ELBOW

	Reusable Steel S.A.E. 37° (JIC/AN)	Reusable Steel S.A.E. 45°	Reusable Steel Inverted Flare S.A.E. Male		Forged Adjustable Reusable Stainless Steel Swivel	Steel Crimp S.A.E. 37° (JIC/AN)
				2	S.A.E. 37° (JIC/AN)	
Hose Size	Packaged Part Number	Packaged Part Number	Packaged Part Number	Fitting Size	Packaged Part Number	Bulk Part Number
-03	FCM1120	_	_	_	FCM1150	FBM1128
-04	FCM1121	_	_	_	FCM1151	FBM1129
-06	FCM1122	FCM1136	FCM1143 FCM1144	-05 -06	_	_
-08	FCM11231	FCM11231	FCM1145	-08		

Replacement Sleeves for Teflon* Fittings

REPLACEMENT SLEEVES (5 PER PACKAGE)



-	e 1995
440	200
	-

Stainless Steel Packaged Part Number	Hose Fitting Dash Size
FCM3821	-03
FCM3822	-04

Please see Pages 44-48 for assembly instructions. *Teflon is a registered trademark of Dupont and under license by Eaton.

¹This fitting mates with both 37° (AN) and 45° male flares.

Bulk or Retail Packaged Parts

FB- prefixed part numbers indicate bulk-packaged products. FC-prefixed part numbers indicate carded/clam shelled (retail-packaged) products. Most products in this catalog can be ordered in either package style by changing the prefix accordingly.

Off-Road Teflon* Brakelines Completely assembled, ready to install.



SPECIFICATIONS

SPECIFICATIONS		
AQP Part Number	Maximum Operating	Pressure
Teflon* Hose Straight-St	raight AN Swivel Ends	
FBPA0030-10	-03 Teflon Hose, 10 inch, Str-Str	3,000 psi
FBPA0030-12	-03 Teflon Hose, 12 inch, Str-Str	3,000 psi
FBPA0030-14	-03 Teflon Hose, 14 inch, Str-Str	3,000 psi
FBPA0030-15	-03 Teflon Hose, 15 inch, Str-Str	3,000 psi
FBPA0030-16	-03 Teflon Hose, 16 inch, Str-Str	3,000 psi
FBPA0030-18	-03 Teflon Hose, 18 inch, Str-Str	3,000 psi
FBPA0030-20	-03 Teflon Hose, 20 inch, Str-Str	3,000 psi
FBPA0030-21	-03 Teflon Hose, 21 inch, Str-Str	3,000 psi
FBPA0030-22	-03 Teflon Hose, 22 inch, Str-Str"	3,000 psi
FBPA0030-24	-03 Teflon Hose, 24 inch, Str-Str	3,000 psi
FBPA0030-26	-03 Teflon Hose, 26 inch, Str-Str	3,000 psi
FBPA0030-28	-03 Teflon Hose, 28 inch, Str-Str	3,000 psi
FBPA0030-30	-03 Teflon Hose, 30 inch, Str-Str	3,000 psi
FBPA0030-32	-03 Teflon Hose, 32 inch, Str-Str	3,000 psi
FBPA0030-36	-03 Teflon Hose, 36 inch, Str-Str	3,000 psi
FBPA0030-42	-03 Teflon Hose, 42 inch, Str-Str	3,000 psi
FBPA0030-48	-03 Teflon Hose, 48 inch, Str-Str	3,000 psi
FBPA0030-50	-03 Teflon Hose, 50 inch, Str-Str	3,000 psi
AN Swivel Ends		
FBPA0039-10	-03 Teflon Hose, 10 inch, Str-90"	3,000 psi
FBPA0039-12	-03 Teflon Hose, 12 inch, Str-90	3,000 psi
FBPA0039-14	-03 Teflon Hose, 14 inch, Str-90	3,000 psi
FBPA0039-15	-03 Teflon Hose, 15 inch, Str-90	3,000 psi
FBPA0039-16	-03 Teflon Hose, 16 inch, Str-90	3,000 psi
FBPA0039-18	-03 Teflon Hose, 18 inch, Str-90	3,000 psi
FBPA0039-20	-03 Teflon Hose, 20 inch, Str-90	3,000 psi
FBPA0039-21	-03 Teflon Hose, 21 inch, Str-90	3,000 psi
FBPA0039-22	-03 Teflon Hose, 22 inch, Str-90	3,000 psi
FBPA0039-24	-03 Teflon Hose, 24 inch, Str-90	3,000 psi
FBPA0039-26	-03 Teflon Hose, 26 inch, Str-90	3,000 psi
FBPA0039-28	-03 Teflon Hose, 28 inch, Str-90	3,000 psi
FBPA0039-30	-03 Teflon Hose, 30 inch, Str-90	3,000 psi
FBPA0039-32	-03 Teflon Hose, 32 inch, Str-90	3,000 psi
FBPA0039-36	-03 Teflon Hose, 36 inch, Str-90	3,000 psi
FBPA0039-42	-03 Teflon Hose, 42 inch, Str-90	3,000 psi
FBPA0039-48	-03 Teflon Hose, 48 inch, Str-90	3,000 psi
FBPA0039-50	-03 Teflon Hose, 50 inch, Str-90	3,000 psi
Applications Off road	broke eluteb gauge N.O.	

SPECIFICATIONS

AQP Part Number	Maximum Opera	ting Pressure
Teflon* Hose Straight-	Straight AN Swivel Ends	
FBPA0040-10	-04 Teflon Hose, 10 inch, Str-Str	3,000 ps
FBPA0040-12	-04 Teflon Hose, 12 inch, Str-Str	3,000 ps
FBPA0040-14	-04 Teflon Hose, 14 inch, Str-Str	3,000 ps
FBPA0040-15	-04 Teflon Hose, 15 inch, Str-Str	3,000 ps
FBPA0040-16	-04 Teflon Hose, 16 inch, Str-Str	3,000 ps
FBPA0040-18	-04 Teflon Hose, 18 inch, Str-Str	3,000 ps
FBPA0040-20	-04 Teflon Hose, 20 inch, Str-Str	3,000 ps
FBPA0040-21	-04 Teflon Hose, 21 inch, Str-Str	3,000 ps
FBPA0040-22	-04 Teflon Hose, 22 inch, Str-Str	3,000 ps
FBPA0040-24	-04 Teflon Hose, 24 inch, Str-Str	3,000 ps
FBPA0040-26	-04 Teflon Hose, 26 inch, Str-Str	3,000 ps
FBPA0040-28	-04 Teflon Hose, 28 inch, Str-Str	3,000 ps
FBPA0040-30	-04 Teflon Hose, 30 inch, Str-Str	3,000 ps
FBPA0040-32	-04 Teflon Hose, 32 inch, Str-Str	3,000 ps
FBPA0040-36	-04 Teflon Hose, 36 inch, Str-Str	3,000 ps
FBPA0040-42	-04 Teflon Hose, 42 inch, Str-Str	3,000 ps
FBPA0040-48	-04 Teflon Hose, 48 inch, Str-Str	3,000 ps
FBPA0040-50	-04 Teflon Hose, 50 inch, Str-Str	3,000 ps
AN Swivel Ends		
FBPA0049-10	-04 Teflon Hose, 10 inch, Str-90	3,000 ps
FBPA0049-12	-04 Teflon Hose, 12 inch, Str-90	3,000 ps
FBPA0049-14	-04 Teflon Hose, 14 inch, Str-90	3,000 ps
FBPA0049-15	-04 Teflon Hose, 15 inch, Str-90	3,000 ps
FBPA0049-16	-04 Teflon Hose, 16 inch, Str-90	3,000 ps
FBPA0049-18	-04 Teflon Hose, 18 inch, Str-90	3,000 ps
FBPA0049-20	-04 Teflon Hose, 20 inch, Str-90	3,000 ps
FBPA0049-21	-04 Teflon Hose, 21 inch, Str-90	3,000 ps
FBPA0049-22	-04 Teflon Hose, 22 inch, Str-90	3,000 ps
FBPA0049-24	-04 Teflon Hose, 24 inch, Str-90	3,000 ps
FBPA0049-26	-04 Teflon Hose, 26 inch, Str-90	3,000 ps
FBPA0049-28	-04 Teflon Hose, 28 inch, Str-90	3,000 ps
FBPA0049-30	-04 Teflon Hose, 30 inch, Str-90	3,000 ps
FBPA0049-32	-04 Teflon Hose, 32 inch, Str-90	3,000 ps
FBPA0049-36	-04 Teflon Hose, 36 inch, Str-90	3,000 ps
FBPA0049-42	-04 Teflon Hose, 42 inch, Str-90	3,000 ps
FBPA0049-48	-04 Teflon Hose, 48 inch, Str-90	3,000 ps
FBPA0049-50	-04 Teflon Hose, 50 inch, Str-90	3,000 ps

Applications: Off-road brake, clutch, gauge, N₂O

Marine Power Trim Hose Lines



Eaton's Aeroquip Performance Products Teflon*/stainless steel marine power trim hose assemblies for I/O power trim systems are completely factory-assembled in standard $14\frac{1}{2}$ " lengths in both 90° and 45° elbow configurations.

Application: Inboard/outboard power trim systems

HOSE SPECIFICATIONSORDERING INFORMATION

	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	Θ			
Hose Dash Size	Hose I.D.	Hose O.D.	Max. Operating Pressure	Min. Bend Radius	Vacuum Service	Packaged Part Number	Fitting Dash Size	Overall Length	Fitting End Configuration
	INCHES	INCHES	PSI	INCHES	INCHES/HG		INCHES		
-04	.19	.30	2,500	2.00	28	FCP0108	-03	141/2	Inverted Flare Straight to Inverted Flare 90° Elbow
-04	.19	.30	2,500	2.00	28	FCP0107	-03	141/2	Inverted Flare Straight to Inverted Flare 45° Elbow

Construction: Extruded Teflon* inner tube with stainless steel single wire-braid cover.

Temperature Range: -100°F to +450°F (-73°C to +232°C).

^{*}Teflon is a registered trademark of Dupont and under license by Eaton.



AQP High Pressure Hose and Fittings (Power Steering)



Abrasion resistant fabric cover for longer life.

AQP High Pressure Hose is ideal for power steering, hydraulics, air, fuel and lubricating oil applications. It has a blue abrasion resistant fabric cover and an AQP synthetic rubber

inner tube. It uses standard steel and brass reusable fittings.

Applications: Power steering lines, hydraulics, air, gasoline, fuel and lubricating oils, over-thewall air tools and DOT-approved air brake.

HOSE SPECIFICATIONS

ORDERING INFORMATION

	0	\bigcirc	\bigcirc	\bigcirc	\odot					
Hose Dash	Hose	Hose	Maximum Operating	Minimum Bend	Vacuum	Bulk Part				
Size	I.D.	0.D.	Pressure	Radius	Service	Number		Package Le	ngth Part Num	nber
	INCHES	INCHES	PSI	INCHES	INCHES/HG		6 FEET	10 FEET	15 FEET	20 FEET
-06	.31	.67	2,250	4.00	28	FBG0600	FCG0606	FCG0610	FCG0615	FCG0620
-08	.41	.77	2,000	4.62	28	FBG0800	FCG0806	FCG0810	FCG0815	FCG0820
-10	.50	.92	1,750	5.50	28	FBG1000	FCG1006	FCG1010	FCG1015	FCG1020
-12	.62	1.08	1,500	6.50	28	FBG1200	FCG1206	FCG1210	FCG1215	FCG1220

Construction: AQP elastomer inner tube, polyester inner braid, single wire-braid reinforcement and blue polyester braid cover.

Temperature Range: Suitable for many applications between -55°F to +300°F (-49°C to +150°C), except air +250F (+121°C).

STRAIGHT FITTING

Reusable Steel Swivel S.A.E. 37° (JIC/AN)



Reusable Steel

Reusable Steel Male Inverted Flare

				_
Hose Size	Bulk Part Number	Thread Size	Bulk Part Number	Thread Size
-06	FBM1302	9⁄16-18	FBM1363	5⁄8-18
-08	FBM1305	3/4-16	FBM1365	3/4-18
-10	FBM1307	7/8-14	_	_
-12	FBM1310	11/16-12	_	_

45° ELBOW FITTING

Reusable Steel S.A.E. 37° (JIC/AN) Reusable Steel Male Inverted Flare S.A.E. Hose Bulk Thread Bulk Thread Size Part Size Part Size Number Number FBM1382 -06 FBM1386 9/16-18 5/8-18 -08 FBM1384 3/4-16 FBM1383 3/4-18 -10 FBM1338 7/8-14

90° ELBOW FITTING





HIGH PRESSURE ADAPTERS

FBM1339 11/16-12

Metric Conversion

-12



Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2608	-06	M16 x 1.5
FCM2609	-06	M18 x 1.5

Note: Used for Saginaw Power Steering Adapter (metric); also G.M. fuel injection conversion adapter for metric 0-ring style porting

Inverted Flare



Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2963	-06	1/2-20
FCM2964	-06	5⁄8-18
FCM2965	-06	11/16-18

Please see Pages 44-48 for assembly instructions.

Bulk or Retail Packaged Parts

FB-prefixed part numbers indicate bulk-packaged products. FC-prefixed part numbers indicate carded/clam shelled (retail-packaged) products. Most products in this catalog can be ordered in either package style by changing the prefix accordingly.





Too Tight And Leaking

One of the most common ways the seat or cone on aluminum fittings and adapters can be easily damaged is by over-tightening (see Torque specifications information on Page 51). If a fitting has been over-tightened, it may be damaged and prone to leaks. Dirt and debris on the sealing surface are also common sources of leaks. Always use Eaton's Aeroquip Performance Products dust caps (Page 36) when disconnecting a hose or fitting to help keep contaminants out of hose and adapters.

AN to Pipe Fittings

MALE AN TO PIPE (AN 816)

		,			
Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2000	FCM5000	FCE2000	FCM2511	-03	1/8
FCM2001	FCM5001	FCE2001	FCM2512	-04	1/8
FCM2002	FCM5002	FCE2002	FCM2515	-04	1/4
FCM2371	_	_	FCM2519	-04	3/8
_	_	_	FCM2524	-04	1/2
	_	_	FCM2513	-05	1/8
_	_	_	FCM2516	-05	1/4
_	_	_	FCM2520	-05	3/8
FCM2003	FCM5003	FCE2003	FCM2514	-06	1/8
FCM2004	FCM5004	FCE2004	FCM2517	-06	1/4
FCM2005	FCM5005	FCE2005	FCM2521	-06	3/8
FCM2013	FCM5013	FCE2013	FCM2525	-06	1/2
	_	_	FCM2529	-06	3⁄4
FCM2006	FCM5006	FCE2006	FCM2518	-08	1/4
FCM2007	FCM5007	FCE2007	FCM2522	-08	3/8
FCM2008	FCM5008	FCE2008	FCM2526	-08	1/2
FCM2372	_	_	FCM2530	-08	3/4
FCM2185	FCM5185	FCE2185	FCM2523	-10	3/8
FCM2009	FCM5009	FCE2009	FCM2527	-10	1/2
	_	_	FCM2531	-10	3/4
FCM2010	FCM5010	FCE2010	FCM2528	-12	1/2
FCM2011	FCM5011	FCE2011	FCM2532	-12	3/4
FCM2014	FCM5014	FCE2014	FCM2534	-12	1
_	_	_	FCM2539	-12	1 1/4
_	_	_	FCM2544	-12	1 1/2
FCM2015	FCM5015	FCE2015	FCM2533	-16	3/4
FCM2012	FCM5012	FCE2012	FCM2535	-16	1
_	_	_	FCM2540	-16	1 1/4
_	_	_	FCM2545	-16	1 1/2
_	_	_	FCM2536	-20	1
FCM2374	_	_	FCM2541	-20	1 1/4
_	_	_	FCM2546	-20	1 1/2
_	_	_	FCM2537	-24	1
	_	_	FCM2542	-24	1 1/4
_	_	_	FCM2547	-24	1 1/2
	_	_	FCM2538	-32	1
			ECM2E42	22	1 1/1







AN TO PIPE PRESSURE GAUGE ADAPTER



Aluminum Blue Anodized Packaged Part Number	"A" Dash Size	"B" Pipe Size	NPT Port Size
		INCHES	INCHES
FCM2276	-6	1/4	1/8
FCM2277	-6	3/8	1/8
FCM2278	-8	1/4	1/8
FCM2279	-8	3⁄8	1/8

AN numbers are for configuration reference only.



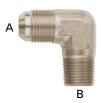












45° MALE AN TO PIPE (AN 823)

Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodiz Packaged Part Number	ed	Aluminum Nickel-Plate Packaged Part Number	d	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size INCHES
FCM2020	FCM5020	FCI	E2020	FC	M2581	-03	1/8
FCM2021	FCM5021	FCI	E2021	FC	M2582	-04	1/8
FCM2440	_	_		FC	M2584	-04	1/4
FCM2441	_	_		FC	M2588	-04	3⁄8
	_	_		FC	M2583	-05	1⁄8
_	_	_		FC	M2585	-05	1/4
FCM2022	FCM5022	FCI	E2022	FC	M2586	-06	1/4
FCM2442	_	_		FC	M2589	-06	3⁄8
FCM2443	_	_		FC	M2592	-06	1/2
FCM2444	_	_		FC	M2587	-08	1/4
FCM2023	FCM5023	FCI	E2023	FC	M2590	-08	3⁄8
FCM2445	_	_		FC	M2593	-08	1/2
FCM2446	_	_		FC	M2596	-08	3⁄4
FCM2447	_	_		FC	M2591	-10	3⁄8
FCM2024	FCM5024	FCI	E2024	FC	M2594	-10	1/2
FCM2448	_	_		FC	M2597	-10	3⁄4
FCM2449	_	_		FC	M2595	-12	1/2
FCM2025	FCM5025	FCI	E2025	FC	M2598	-12	3⁄4
FCM2450	_	_		FC	M2600	-12	1
_	_	_		FC	M2599	-16	3⁄4
FCM2026	_			FC	M2601	-16	1
	_		•	FC	M2602	-20	1
FCM2451	_	_		FC	M2603	-20	1 1/4

FEMALE PIPE TO MALE AN

Steel Packaged Part Number	"A" Dash Size	"B" Dash Size INCHES
FCM2719	-03	1/8
FCM2720	-03	1/4
FCM2721	-04	1/8
FCM2722	-05	1/8
FCM2723	-04	1/4
FCM2724	-05	1/4
FCM2725	-06	1/4
FCM2726	-08	1/4
FCM2727	-06	3/8
FCM2728	-08	3/8
FCM2729	-06	1/2
FCM2730	-08	1/2
FCM2731	-10	1/2
FCM2732	-12	1/2
FCM2733	-08	3/4
FCM2734	-10	3/4
FCM2735	-12	3/4
FCM2736	-16	1
FCM2737	-20	1 1/4

90° AN TO PIPE (AN 822)

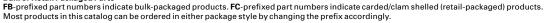
Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2030	FCM5030	FCE2030	FCM2610	-03	1/8
FCM2031	FCM5031	FCE2031	FCM2611	-04	1/8
FCM2032	FCM5032	FCE2032	FCM2614	-04	1/4
_	_	_	FCM2618	-04	3/8
_	_	_	FCM2624	-04	1/2
_	_	_	FCM2612	-05	1/8
_	_	_	FCM2615	-05	1/4
_	_	_	FCM2619	-05	3/8
FCM2033	FCM5033	FCE2033	FCM2613	-06	1/8
FCM2034	FCM5034	FCE2034	FCM2616	-06	1/4
FCM2035	FCM5035	FCE2035	FCM2620	-06	3/8
FCM2290	_	_	FCM2625	-06	1/2
FCM2036	FCM5036	FCE2036	FCM2617	-08	1/4
FCM2037	FCM5037	FCE2037	FCM2621	-08	3/8
FCM2038	FCM5038	FCE2038	FCM2626	-08	1/2
FCM2291	_	_	FCM2629	-08	3/4
FCM2016	FCM5016	FCE2016	FCM2622	-10	3/8
FCM2039	FCM5039	FCE2039	FCM2627	-10	1/2
FCM2292	_	_	FCM2630	-10	3/4
_	_	_	FCM2623	-12	3/8
FCM2017	FCM5017	FCE2017	FCM2628	-12	1/2
FCM2040	FCM5040	FCE2040	FCM2631	-12	3/4
FCM2293	_	_	FCM2633	-12	1
FCM2018	_	_	FCM2632	-16	3/4
FCM2041	_	_	FCM2634	-16	1
_	_	_	FCM2636	-16	1 1/4
_	_	_	FCM2635	-20	1
FCM2294	_	_	FCM2637	-20	1 1/4
_	_		FCM2639	-20	1 1/2
	_	_	FCM2638	-24	1 1/4





AN numbers are for configuration reference only.

Bulk or Retail Packaged Parts



AN to AN Fittings

FLARE UNION (AN 815)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2050	FCM5050	FCE2050	FCM2750	-03	-03
FCM2051	FCM5051	FCE2051	FCM2751	-04	-04
	_	_	FCM2753	-05	-05
FCM2052	FCM5052	FCE2052	FCM2756	-06	-06
FCM2053	FCM5053	FCE2053	FCM2759	-08	-08
FCM2054	FCM5054	FCE2054	FCM2761	-10	-10
FCM2055	FCM5055	FCE2055	FCM2763	-12	-12
FCM2056	FCM5056	FCE2056	FCM2765	-16	-16
_	_	_	FCM2766	-20	-20

UNION REDUCER (AN 919)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2048	FCM5048	FCE2048	FCM2749	-04	-03
_	_	_	FCM2752	-05	-04
FCM2156	FCM5156	FCE2156	FCM2754	-06	-04
_	_	_	FCM2755	-06	-05
FCM2049	FCM5049	FCE2049	FCM2757	-08	-04
FCM2160	FCM5160	FCE2160	FCM2758	-08	-06
FCM2188	_	_	_	-10	-04
FCM2162	FCM5162	FCE2162	_	-10	-06
FCM2163	FCM5163	FCE2163	FCM2760	-10	-08
FCM2189	_	_	_	-12	-04
FCM2165	_	_	_	-12	-06
FCM2166	FCM5166	FCE2166	_	-12	-08
FCM2167	FCM5167	FCE2167	FCM2762	-12	-10
FCM2169	_	_	_	-16	-10
FCM2170	FCM5170	FCE2170	FCM2764	-16	-12

REDUCER AN FLARE SWIVEL/AN FLARE (JIC/AN)



Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2408	-06	-04
FCM2409	-08	-04
FCM2410	-08	-06
FCM2411	-10	-06
FCM2413	-12	-06
FCM2414	-12	-08
FCM2416	-16	-06

REDUCER AN FLARE/AN FLARE (JIC/AN)



Steel	"A"	"B"
Packaged Part Number	Dash	Dash
Part Number	Size	Size
FCM2421	-10	-08
FCM2422	-12	-10



AN (Army-Navy)

The AN (Army-Navy) standard was established many years ago by the U.S. military to set a common measurement for hose and fittings. It designates the outside diameter (0.D.) of the ridged metal tube that is compatible with each size of fitting. Still today, this AN dash standard is the benchmark measurement for military, industrial and the performance hose applications. These dash sizes are expressed as the numerator of the fraction, with the denominator always being 16. For example, a -04 port is 4/16 or 1/4-inch.

AN numbers are for configuration reference only.

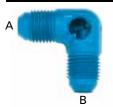


90° ELBOW UNION (AN 821)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2186	FCM5186	FCE2186	-03	-03
FCM2119	FCM5119	_	-04	-04
FCM2120	FCM5120	FCE2120	-06	-06
FCM2190	FCM5190	FCE2190	-08	-08
FCM2191	_	_	-12	-12

90° MALE AN TO AN PRESSURE GAUGE ADAPTER



Blue Anodized Packaged Part Number	"A" Dash Size	"B" Dash Size	NPT Port Size
FCM2272	-6	-6	1/8
FCM2273	-8	-8	1/8
FCM2274	-10	-10	1/8

AN Swivel Adapters

FEMALE FLARE SWIVEL



Aluminum Blue Anodized Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2914	-04	-04
FCM2915	-06	-06
FCM2916	-08	-08
FCM2917	-10	-10
FCM2918	-12	-12
FCM2919	-16	-16

45° MALE AN TO FEMALE SWIVEL FLARE



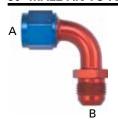
Aluminum Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM3148	-6	-6
FCM3149	-8	-8
FCM3150	-10	-10
FCM3151	-12	-12

45° FEMALE FLARE SWIVEL



Aluminum Blue/Red Anodized Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2971	-06	-06
FCM2972	-08	-08
FCM2973	-10	-10
FCM2974	-12	-12
FCM2975	-16	-16

90° MALE AN TO FEMALE SWIVEL FLARE



Aluminum Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM3155	-6	-6
FCM3156	-8	-8
FCM3157	-10	-10
FCM3158	-12	-12

90° FEMALE FLARE SWIVEL



Aluminum Blue/Red Anodized Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2978	-06	-06
FCM2979	-08	-08
FCM2980	-10	-10
FCM2981	-12	-12
FCM2982	-16	-16



AN numbers are for configuration reference only.

Bulk or Retail Packaged Parts

FB-prefixed part numbers indicate bulk-packaged products. FC-prefixed part numbers indicate carded/clam shelled (retail-packaged) products. Most products in this catalog can be ordered in either package style by changing the prefix accordingly.



Pipe to Pipe

MALE PIPE NIPPLE (AN 911)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	"A" Pipe Size INCHES	"B" Pipe Sizes INCHES	
FCM2132	FCM5132	FCE2132	1/8	1/8	
FCM2133	FCM5133	FCE2133	1/4	1/4	
FCM2134	FCM5134	FCE2134	3/8	3⁄8	
FCM2135	FCM5135	FCE2135	1/2	1/2	

PIPE COUPLING (AN 910)



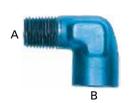
Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	"A" Pipe Size INCHES	"B" Pipe Size INCHES
FCM2129	FCM5129	FCE2129	1/8	1/8
FCM2130	FCM5130	FCE2130	1/4	1/4
FCM2131	FCM5131	_	3/8	3/8

PIPE BUSHING (AN 912)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	"A" Pipe Size INCHES	"B" Pipe Size INCHES
FCM2136	FCM5136	FCE2136	1/4	1/8
FCM2137	FCM5137	FCE2137	3/8	1/4
FCM2138	FCM5138	FCE2138	3/8	1⁄8
FCM2139	FCM5139	FCE2139	1/2	3/8
FCM2140	FCM5140	FCE2140	1/2	1/4
FCM2141	FCM5141	FCE2141	1/2	1/8
FCM2144	_	_	3/4	1/4
FCM2143	_	_	3/4	3/8
FCM2142	FCM5142	FCE2142	3/4	1/2
FCM2146	_	_	1	1/2
FCM2145	_	_	1	3/4

90° ELBOW, FEMALE TO MALE PIPE ELBOW (AN 914)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	"A" Pipe Size INCHES	"B" Pipe Size INCHES	
FCM2147	FCM5147	FCE2147	1/8	1/8	
FCM2148	FCM5148	_	1/4	1/4	
FCM2149	FCM5149	_	3/8	3/8	

Tube Fittings

VERSIL•FLARE™ FLARELESS TUBE NUT¹



Part Number	Dash Size	Tube O.D.	Thread	Α
FCM2496	-04	.25	7/16-20	.82
FCM2497	-06	.38	9⁄16-18	.86
FCM2498	-08	.50	3/4-16	1.08
FCM2499	-10	.63	7/8-14	1.12
FCM2500	-12	.75	11/16-12	1.35

VERSIL•FLARE™ FLARELESS TUBE FERRULE¹



Part Number	Dash Size	Tube O.D.	А	В
FCM2491	-04	.25	.82	.25
FCM2492	-06	.38	.86	.38
FCM2493	-08	.50	1.08	.50
FCM2494	-10	.63	1.12	.62
FCM2495	-12	.75	1.36	.75

AN numbers are for configuration reference only.

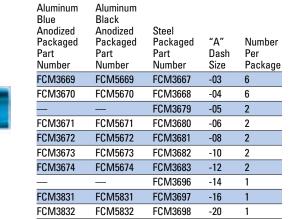


 $^{^{1}\}textit{Versil} \mbox{-}\textit{Flare}$ tube nut and tube sleeve are only to be used together.

TUBE NUT (AN 818)1

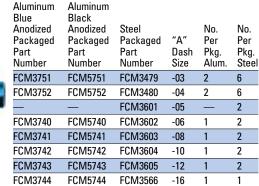
Aluminum Aluminum Blue Black Anodized Anodized Steel No. No. Packaged Packaged Packaged "A" Per Per Pkg. Part Part Part Dash Pkg. Number Alum. Steel Number Number Size FCM3554 FCM5554 FCM3591 -03 6 FCM3555 FCM5555 FCM3570 -04 6 1 FCM3571 -05 FCM3675 FCM5675 FCM3572 -06 2 1 FCM3676 FCM3573 -08 2 FCM3677 FCM5677 FCM3574 -10 2 1 FCM3678 FCM5678 FCM3575 -12 2 FCM3576 -14 1 FCM3829 FCM5829 FCM3577 -16 FCM3830 FCM5830 FCM3578 -20 1

TUBE SLEEVE (AN 819)1



Caps and Plugs

CAP (AN 929)2

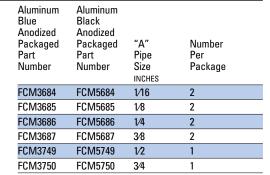


FCM3567

-20

1

ALLEN HEAD PIPE PLUG (AN 932)





O-ring BOSS PLUG (AN 814)

FCM3567

FCM5567

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100 (A11	017)	
Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	"A" Dash Size
FCM3722	FCM5722	-03
FCM3723	FCM5723	-04
FCM3724	FCM5724	-06
FCM3725	FCM5725	-08
FCM3726	FCM5726	-10
FCM3727	FCM5727	-12
FCM3827	FCM5827	-16
FCM3828	FCM5828	-20

FLARE PLUG (AN 806)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Steel Packaged Part Number	"A" Dash Size
FCM3712	FCM5712	FCM3701	-03
FCM3713	FCM5713	FCM3702	-04
FCM3714	FCM6714	FCM3703	-06
FCM3715	FCM5715	FCM3704	-08
FCM3716	FCM5716	FCM3705	-10
FCM3717	FCM5717	FCM3706	-12
FCM3718	FCM5718	FCM3707	-16
FCM3719	FCM5719	FCM3708	-20

For replacement 0-rings see Page 37.



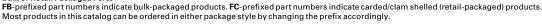
Abrasion Concerns

Abrasion is one of the leading causes of hose failures. AQP Racing Hose offers a great steel "armor cover", and StartLite offers the industry's best abrasion resistance of any lightweight hose. Regardless of the type of hose, always route the hose correctly and use support clamps where needed. See page 52 for routing tips.

¹Tube nut and tube sleeve are only to be used together.

AN numbers are for configuration reference only.

Bulk or Retail Packaged Parts





Motor City National

²Aluminum tube caps are 2 piece.

O-ring Boss (ORB) to Male AN

O-ring BOSS TO MALE 37°



Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM5992*	_	_	-04	-04
FCM5993*	_	_	-06	-06
FCM5995*	_	_	-08	-08
FCM5996*	_	_	-06	-06
FCM5997*	_	_	-08	-08
FCM5998*	_	_	-10	-08
FCM5999*	_	_	-08	-10
FCM5953*	FCE2953*	FCM2957*	-10	-10
FCM5954*	FCE2954*	FCM2958*	-10	-12
FCM6001*	_	_	-12	-10
FCM5955*	FCE2955*	FCM2959*	-12	-12
FCM5956*	FCE2956*	FCM2960*	-12	-16
FCM6002*	_	_	-16	-12
FCM6003*		_	-16	-16
	Black Anodized Packaged Part Number FCM5992* FCM5993* FCM5995* FCM5996* FCM5997* FCM5998* FCM5999* FCM5953* FCM5954* FCM6001* FCM5955* FCM5956* FCM6002*	Black Anodized Packaged Part Number Packaged Packaged Part Number Packaged	Black Anodized Packaged Part Number Nickel-Plated Packaged Part Number Steel Packaged Part Number FCM5992* — — FCM5993* — — FCM5996* — — FCM5997* — — FCM5998* — — FCM5998* — — FCM5993* FCE2953* FCM2957* FCM5954* FCE2954* FCM2957* FCM6001* — — FCM5955* FCE2955* FCM2959* FCM5956* FCE2956* FCM2960* FCM6002* — —	Black Anodized Packaged Part Number Nickel-Plated Packaged Part Number Steel Packaged Part Number "A" Packaged Part Number FCM5992* — — -04 FCM5993* — — -06 FCM5995* — — -08 FCM5996* — — -06 FCM5997* — — -08 FCM5998* — — -10 FCM5999* — — -08 FCM5953* FCE2953* FCM2957* -10 FCM5954* FCE2954* FCM2958* -10 FCM6001* — — -12 FCM5956* FCE2956* FCM2960* -12 FCM6002* — — -16

LOW PROFILE 90° O-ring BOSS TO MALE 37°



Aluminum Blue Anodized Packaged	Aluminum Black Packaged	Aluminum Nickel-Plated Packaged	"A" Dash	"B" Dash
Part Number	Part Number	Part Number	Size	Size
FCM2263*	FCM5263*	FCE2263*	-12	-12

AN to Metric

AN FLARE TO METRIC ADAPTERS



Aluminum Blue Anondized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	"A" Dash Size	"B" Pipe Size
FCM2239	_	_	-04	10MM x 1.0
FCM2246	FCM5246	FCE2246	-06	12MM x 1.5
FCM2240	FCM5240	FCE2240	-06	14MM x 1.5
FCM2241	FCM5241	_	-06	16MM x 1.5
FCM2242	_	_	-06	18MM x 1.5
FCM2243	FCM5243	FCE2243	-08	16MM x 1.5
FCM2244	FCM5244	_	-08	18MM x 1.5
FCM2245	FCM5245	_	-10	18MM x 1.5

METRIC CONVERSION ADAPTERS



Steel Packaged Part Number	"A" Dash Size	"B" Pipe Size
FCM2608	-06	M16 x 1.5
FCM2609	-06	M18 x 1.5

Note: Used for Saginaw Power Steering Adapter (metric); also G.M. fuel injection conversion adapter for metric 0-ring style porting.

High Pressure Adapters

INVERTED FLARE



Steel	"A"	"B"
Packaged	Dash	Pipe Size
Part Number	Size	Size
		INCHES
FCM2963	-06	1/2-20
FCM2964	-06	5⁄8-18
FCM2965	-06	11/16-18

^{*0-}ring material is Viton.

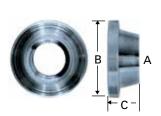


Aluminum Tank Welding Bungs

AN NUMBERS ARE FOR CONFIGURATION REFERENCE ONLY.

Connects to Male AN Flare with hex and O-ring (AN 816, AN 919, AN 832 and O-ring Boss Plug). Refer to Page 24 for O-rings.

TANK WELDING BUNGS (AN 871)



Packaged Part Number	"A" Dash Size	"B"	"C"
FCM2403	-06	1.56	.59
FCM2404	-08	1.75	.68
FCM2405	-10	1.87	.75
FCM2406	-12	2.00	.90
FCM2407	-16	2.25	.93

Special Flare Adapters

FLARE TO BRAZE (UNPLATED)



Steel Packaged Part Number	"A" Dash Size	"B" Tube O.D. INCHES	"C" Counterbord Depth
FCM2871	-04	1/4	.16
FCM2872	-06	3/8	.16
FCM2873	-06	1/2	.16
FCM2874	-08	1/2	.16
FCM2875	-10	5⁄8	.16
FCM2876	-10	3/4	.25
FCM2877	-12	3/4	.25
FCM2878	-12	1	.25
FCM2879	-16	1	.25
FCM2880	-20	1 1/4	.25

Bulkhead Adapters

BULKHEAD UNION² (AN 832)



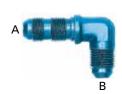
Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size	
FCM2769	FCM5769	FCE2769	FCM2770	-03	-03	
FCM2071	FCM5071	FCE2071	FCM2771	-04	-04	
_	_	_	FCM2772	-04	-06	
_	_	_	FCM2773	-05	-05	
FCM2072	FCM5072	FCE2072	FCM2774	-06	-06	
FCM2073	FCM5073	FCE2073	FCM2775	-08	-08	
FCM2074	FCM5074	FCE2074	FCM2776	-10	-10	
FCM2075	FCM5075	FCE2075	FCM2777	-12	-12	
FCM2076	FCM5076	FCE2076	FCM2778	-16	-16	
FCM2077	FCM5077	FCE2077	FCM2779	-20	-20	

45° ELBOW BULKHEAD UNION¹ (AN 837)



	Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
	FCM2893	FCM5893	_	-03	-03
	FCM2127	_	FCM2781	-04	-04
	_	_	FCM2782	-05	-05
	FCM2128	_	FCM2783	-06	-06
3	FCM2425	_	FCM2784	-08	-08
	FCM2426	_	FCM2785	-10	-10
	_	—	FCM2786	-12	-12
	_	_	FCM2787	-16	-16
		_	FCM2788	-20	-20

90° ELBOW BULKHEAD UNION¹ (AN 833)



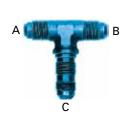
Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size	
FCM2799	FCM5799	FCE2799	FCM2790	-03	-03	
FCM2081	FCM5081	FCE2081	FCM2791	-04	-04	
_	_	_	FCM2792	-05	-05	
FCM2082	FCM5082	FCE2082	FCM2793	-06	-06	
FCM2083	FCM5083	FCE2083	FCM2794	-08	-08	
FCM2084	FCM5084	FCE2084	FCM2795	-10	-10	
FCM2085	FCM5085	_	FCM2796	-12	-12	
FCM2086	_	_	FCM2797	-16	-16	
_	_	_	FCM2798	-20	-20	

AN numbers are for configuration reference only.

Bulk or Retail Packaged Parts

FB-prefixed part numbers indicate bulk-packaged products. FC-prefixed part numbers indicate carded/clam shelled (retail-packaged) products. $Most \ products \ in \ this \ catalog \ can \ be \ ordered \ in \ either \ package \ style \ by \ changing \ the \ prefix \ accordingly.$

BULKHEAD TEE¹ (AN 834)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size	"C" Dash Size
FCM2808	_	FCM2800	-03	-03	-03
FCM2091	FCM5091	FCM2801	-04	-04	-04
_	_	FCM2802	-05	-05	-05
FCM2092	_	FCM2803	-06	-06	-06
FCM2093	_	FCM2804	-08	-08	-08
FCM2899	_	FCM2805	-10	-10	-10
_	_	FCM2806	-12	-12	-12
_	_	FCM2807	-16	-16	-16

BULKHEAD RUN TEE¹ (AN 804)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part No.	"A" Dash Size	"B" Dash Size	"C" Dash Size
FCM2815	FCM5815	FCE2815	FCM2809	-03	-03	-03
FCM2117	_	_	_	-04	-04	-04
FCM2118	_	_	FCM2811	-06	-06	-06
FCM2180	_	_	FCM2812	-08	-08	-08
FCM2816	_	_	FCM2813	-12	-12	-12
_	_	_	FCM2814	-16	-16	-16

BULKHEAD MALE CONNECTOR²



_		
Steel Packaged Part Number	"A" Dash Size	"B" Pipe Size INCHES
FCM2831	-04	1/4
FCM2832	-08	3/8
FCM2833	-10	1/2
FCM2834	-12	3/4
FCM2835	-16	1

BULKHEAD FEMALE CONNECTOR²



Steel Packaged Part Number	"A" Dash Size	"B" Pipe Size INCHES
FCM2821	-04	1/8
FCM2822	-08	3/8
FCM2823	-10	1/2
FCM2824	-12	3/4
FCM2825	-16	1

LOCKNUT (AN 924)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	Dash Size	Number Per Package	
FCM3556	FCM5556	FCE3556	FCM2095	-03	2	
FCM2099	FCM5099	FCE2099	FCM2096	-04	2	
_	_	_	FCM2097	-05	2	
FCM2100	FCM5100	FCE2100	FCM2098	-06	2	
FCM2103	FCM5103	FCE2103	FCM3584	-08	1	
FCM2104	FCM5104	FCE2104	FCM3585	-10	1	
FCM2105	FCM5105	FCE2105	FCM3586	-12	1	
FCM2106	FCM5106	FCE2106	FCM3587	-16	1	
FCM3833	_	_	FCM3588	-20	1	

²Locknut included.



AN numbers are for configuration reference only.

¹Aluminum part numbers do NOT include locknut. Locknut must be ordered separately for aluminum parts. Steel parts DO include nuts.

Tee Adapters

UNION TEE (AN 824)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	"A" Dash Size	"B" Dash Size	"C" Dash Size
FCM2060	FCM5060	FCE2060	-03	-03	-03
FCM2061	FCM5061	FCE2061	-04	-04	-04
FCM2062	FCM5062	FCE2063	-06	-06	-06
FCM2063	FCM5063	FCE2064	-08	-08	-08
FCM2064	FCM5064	_	-10	-10	-10
FCM2065	FCM5065	_	-12	-12	-12
FCM2066	_	_	-16	-16	-16

MALE BRANCH TEE (AN 825)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	"A" Dash Size	"B" Dash Size	"C" Pipe Size INCHES	
FCM2187	FCM5187	FCE2187	-03	-03	1/8	
FCM2121	FCM5121	FCE2121	-04	-04	1/8	
FCM2122	FCM5122	FCE2122	-06	-06	1/4	
FCM2123	FCM5123	_	-08	-08	3/8	
FCM2251	_	_	-10	-10	3/8	
FCM2252	_	_	-12	-12	34	

MALE RUN TEE (AN 826)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Anodized Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Pipe Size	"C" Dash Size INCHES
FCM2714	FCM5714	FCM2700	-03	1/8	-03
FCM2124	FCM5124	FCM2701	-04	1/8	-04
<u> </u>	_	FCM2703	-04	1/4	-04
_	_	FCM2702	-05	1/8	-05
FCM2125	FCM5125	FCM2704	-06	1/4	-06
_	_	FCM2705	-06	3/8	-06
FCM2126	FCM5126	FCM2706	-08	3/8	-08
_	_	FCM2707	-08	1/2	-08
_	_	FCM2708	-10	1/2	-10
FCM2298	_	FCM2709	-10	3/4	-10
FCM2299		FCM2710	-12	3/4	-12
	_	FCM2711	-16	1	-16
_	_	FCM2712	-20	1 1/4	-20

FEMALE PIPE FLARE TEE



Steel Packaged Part Number	"A" Dash Size	"B" Dash Size INCHES	"C" Pipe Size
FCM2881	-03	-03	1/8
FCM2882	-04	-04	1/8
FCM2883	-04	-04	1/4
FCM2884	-06	-06	1/4
FCM2885	-08	-08	3/8

FEMALE PIPE FLARE TEE

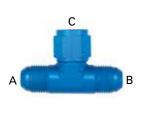


"A" Dash Size	"B" Pipe Size	"C" Dash Size INCHES
-03	1/8	-03
-04	1/8	-04
-04	1/4	-04
	Dash Size -03 -04	Dash Size Pipe Size -03 1/8 -04 1/8

FEMALE FLARE TEE

Aluminum "A" "B" "C" Blue Anodized Packaged Dash Dash Dash Part Number Size Size Size FCM2173 -04 -04 -04 FCM2174 -06 -06 -06 FCM2175 -08 -08 -08 FCM2176 -10 -10 -10 FCM2177 -12 -12 -12

TEE WITH FEMALE ON THE BOTTOM



Aluminum Blue Anodized Packaged Part Number	"A" Dash Size	"B" Dash Size	"C" Dash Size
FCM2281	-4	-4	-4
FCM2282	-6	-6	-6
FCM2283	-8	-8	-8
FCM2284	-10	-10	-10
FCM2285	-12	-12	-12
FCM2286	-16	-16	-16

FEMALE PIPE TEE (AN 917)



Aluminum Blue Anodized Packaged Part Number	Aluminum Black Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	"A" Pipe Size INCHES	"B" Pipe Size INCHES	"C" Pipe Size INCHES
FCM2150	FCM5150	FCE2150	1/8	1/8	1/8
FCM2151	FCM5151	_	1/4	1/4	1/4
FCM2152	FCM5152	_	3/8	3/8	3/8

FEMALE ON THE RUN TEE



_	*				
	Aluminum Blue Anodized Packaged Part Number	Aluminum Black Packaged Part Number	"A" Dash Size	"B" Dash Size	"C" Dash Size
	FCM2254	FCM5254	-04	-04	-04
	FCM2255	FCM5255	-06	-06	-06
	FCM2256	FCM5256	-08	-08	-08
	FCM2257	_	-10	-10	-10
	FCM2258	_	-12	-12	-12
	FCM2259	_	-16	-16	-16

Inverted Flare Brake Adapters

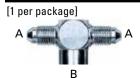
S.A.E. 37° MALE FLARE TO 42° INVERTED FLARE

[Short; 2 per package]	Steel Packaged Part Number	"A" Hose Fitting Dash Size	"B" Brake Thread Size	Length INCHES
	FCM2926	-03	3⁄8 - 24	1.07
A СМО В	FCM2927	-04	3⁄8 - 24	1.14
	FCM2928	-03	3⁄8 - 24	1.07
	FCM2929	-03	7/16 - 24	1.14
	FCM2930	-04	7/16 - 24	1.14

Note: FCM2926 has a 9/16" hex and FCM2928 has a 7/16" hex.

FCM2931 1/2 - 20 -04 1.16

S.A.E. 37° MALE FLARE TO FEMALE INVERTED **FLARE TEE**



Steel	"A"	"B"
Packaged	Hose Fitting	Brake
Part	Dash	Thread
Number	Size	Size
FCM2909	-03	3/8 - 24
FCM2910	-04	3⁄8 - 24

S.A.E. 37° MALE FLARE TO 42° MALE **INVERTED FLARE**

[Long 2-3/8"; 2 per package]



Steel	"A"	B
Packaged	Hose Fitting	Brake
Part	Dash	Thread
Number	Size	Size
FCM2932	-03	3⁄8 - 24
FCM2933	-04	3⁄8 - 24
FCM2934	-03	7/16 - 24
FCM2935	-04	7/16 - 24

S.A.E. 37° MALE FLARE TO 30° INVERTED FLARE

[Short; 2 per package]

Steel Packaged Part Number	"A" Hose Fitting Dash Size	"B" Brake Thread Size	Length INCHES
FCM2950	-04	7/16 - 20	2.50
FCM2925	-04	7/16 - 20	1.33

S.A.E. 37° MALE FLARE TO FEMALE **INVERTED FLARE**



	Steel Packaged Part Number	"A" Hose Fitting Dash Size	"B" Brake Thread Size
3	FCM2936	-03	3/8 - 24
	FCM2937	-04	3/8 - 24

S.A.E. Banjo Brake Adapters

S.A.E. 37° FLARE TO BANJO

[2 per package]



Steel	"A"	"B"
Packaged	Hose Fitting	Brake
Part	Dash	Thread
Number	Size	Size
FCM2949	-03	3/8
FCM2938	-04	3/8
FCM2939	-03	7/16
FCM2940	-04	7/16

S.A.E. BANJO BOLT

[1 per package]



"A"	Crushwasher ¹
Thread	Part
Size	Number
3/8-24	FCM3642
7/16-20	FCM3513
	Thread Size 3/8-24

Metric Brake Adapters

S.A.E. 37° MALE FLARE TO METRIC FLARE

[2 per package]



Steel Packaged Part Number	"A" Hose Fitting Dash Size	"B" Brake Thread Size
FCM2941	-03	10mm x 1
FCM2942	-03	10mm x 1.25
FCM2966	-03	10mm x 1.5
FCM2943	-04	10mm x 1
FCM2944	-04	10mm x 1.25
FCM2967	-04	10mm x 1.5

S.A.E. 37° MALE FLARE TO FEMALE METRIC FLARE

[2 per package]



Steel	"A"	"B"
Packaged	Hose Fitting	Brake
Part	Dash	Thread
Number	Size	Size
FCM2945	-03	10mm x 1
FCM2946	-04	10mm x 1

Metric Banjo Brake Adapters

S.A.E. 37° MALE FLARE TO METRIC BANJO

[2 per package]



	Steel	"A"	"B"
	Packaged	Hose Fitting	Brake
	Part	Dash	Thread
	Number	Size	Size
)	FCM2947	-03	10mm
	FCM2948	-04	10mm

METRIC BANJO BOLT

[1 per package]

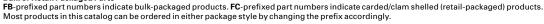


Steel Packaged Part Number	"A" Thread Size	Crushwasher ¹ Part Number
FCM2923	10mm x 1.25	FCM3642
FCM2968	10mm x 1.5	FCM3642



¹Two crushwashers are required.

Bulk or Retail Packaged Parts





FUEL SYSTEM COMPONENTS

Aluminum Banjo Fittings

BANJO FITTINGS - For Use with AQP® and Startlite® Racing Hose

DANSO III III	103-1010	SE WILLI	Au and Startiffe Having Hose
	Packaged Part Number	Hose Fitting Size	Application
	FCM1066	-06	Banjo Fitting for Holley Single Feed 600-660 Series and all two barrel series with 9/16 -24 thread
(1)			Replacement Crushwasher FCM3627



FCM1067

-06

-06

-06

-06

Banjo Fitting for Weber bowls with 12mm x 1.5 thread Replacement Crushwasher



FCM1070

Banjo Fitting for Solex Carburetors with 12mm x 1.25 thread Replacement Crushwasher FCM3627



FCM1069

Banjo Fitting for multiple carb application Holley 600-660 Series with 9/16 - 24 thread

Replacement Crushwasher FCM3627



FCM1068

Banjo Fitting for multiple carb application Weber 12mm x 1.5

Replacement Crushwasher FCM3627

Refer to Page 37 for Replacement Crushwashers and Replacement O-rings.



FUEL PUMP ADAPTERS

Blue Anodized Packaged Part Number	Hose Fitting Size	Application
FCM2108	-06	Inverted Flare 5/8-18 thread
FCM2111	-06	Inverted Flare 1/2-20 thread
FCM2185	-10	3/8 Male pipe to Flare for Holley Electric Fuel Pumps





S.A.E. 37° MALE FLARE TO 42° INVERTED FLARE



	Packaged Part Number	Hose Fitting Dash Size	Brake Thread Size	Length INCHES
3	FCM2181	-03	1/2-20	1.07
	FCM2182	-04	1/2-20	1.14

MALE NICKEL-PLATED FUEL PUMP ADAPTER

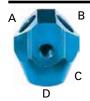


LAILDIC	LE I OIVII	ADAI ILII	
Packaged Part Number	Hose Fitting Dash Size	Thread Size	
FCE2185	-10	3/8	



Aluminum Fuel Blocks

FUEL BLOCKS



Blue Anodized Packaged Part Number	Black Packaged Part Number	Nickel-Plated Packaged Part Number	"A" Pipe Size INCHES	"B" Pipe Size INCHES	"C" Pipe Size INCHES	"D" Pipe Size INCHES
FCM2178	_	_	1/4	1/4	1/8	3⁄8
FCM2179	FCM5179	FCE2179	3⁄8	3⁄8	1/8	1/2

Aluminum In-Line Fuel Pressure Adapter

IN-LINE FUEL PRESSURE ADAPTER



Blue Anodized Packaged Part Number	Black Packaged Part Number	Nickel-Plated Packaged Part Number	"A" Dash Size	"B" Dash Size INCHES	"C" Pipe Size
FCM2183	FCM5183	FCE2183	-06	-06	1/8
FCM2184	FCM5184	FCE2184	-08	-08	1/8

Note: Ports A and B to carburetor; C = gauge port; and D = main feed.

Fuel Pump to Carburetor Hose Kits

GM PRODUCTS WITH QUAD THROUGH 1974

Packaged Part Number	Description
FCP0138	30" FBA0600 AQP® Racing Hose FBM1012 Aluminum Fitting FBM4032 Aluminum Fitting FBM2114 Adapter FBM2108 Adapter

FORD PRODUCTS WITH HOLLEY CARBURETORS

Packaged Part Number	Description		
FCP0140	30" FBA0600 AQP® Racing Hose FBM1012 Aluminum Fitting FBM4032 Aluminum Fitting FBM1066 Aluminum Fitting FBM2111 Adapter		



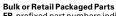


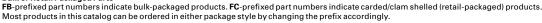
GM PRODUCTS WITH QUAD AFTER 1974 Packaged

Part Number	Description
FCP0139	30" FBA0600 AQP® Racing Hose
	FBM1012 Aluminum Fitting
	FBM4032 Aluminum Fitting
	FBM2108 Adapters (2)









FUEL SYSTEM COMPONENTS (CONT.)

Aluminum Carburetor Adapters

CARBURETOR AD	DAPTERS
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Blue Anodized Packaged Part Number	Black Anodized Packaged Part Number	Nickel-Plated Packaged Part Number	Hose Fitting Size	Application
FCM2113	FCM5113	FCE2113	-06	Holley Single Feed 600-660 Series, 4010/4011 Series and all two barrel series with 9/16-24 thread; fits Demon carburetors Replacement Crushwasher FCM3514
FCM2114	FCM5114	FCE2114	-06	Holley Dual Feed 750 through Dominator 1350 Series and Quadrajet up to 1974 with 7/8-20 thread Replacement Crushwasher FCM3516
FCM2961	_	_	-08	Holley Dual Feed 750 through Dominator 1350 Series and Quadrajet up to 1974 with 7/8-20 thread; available in steel only Replacement Crushwasher FCM3516
FCM2110	FCM5110	FCE2110	-08	Holley Dual Feed 750 through Dominator 1350 Series and Quadrajet up to 1974 with 7/8-20 thread Replacement Crushwasher FCM3516
FCM2193	FCM5193	_	-06	Holley Dual Feed 750 through Dominator 1350 Series and Quadrajet up to 1974 with 7/8-20 thread Replacement Crushwasher FCM3516
FCM2192	FCM5192	FCE2192	-08	Holley Dual Feed 750 through Dominator 1350 Series and Quadrajet up to 1974 with 7/8-20 thread Replacement Crushwasher FCM3516
FCM2107	FCM5107	FCE2107	-06	Quadrajet 1975 and later 1-20 thread Replacement Crushwasher FCM3517
FCM2112	FCM5112	FCE2112	-06	Carter AFB two and four barrel with 5⁄8-20 thread Replacement O-ring FCM3489
FCM2116	FCM5116	FCE2116	-06	Weber Bowl Fitting 12mm x 1.5 thread
FCM2247	FCM5247	FCE2247	-06	Demon carburetors or applications with 9/16-24 threads and -06 female swivel Replacement Crushwater FBM3514
FCM2248	FCM5248	FCR2248	-08	Demon carburetors or applications with 9/16-24 threads and -08 female swivel Replacement Crushwater FBM3514
FCM2249	_	_	-08	Demon carburetors or applications with 9/16-24 threads and -08 male swivel Replacement Crushwater FBM3514

Dual Feed Carburetor Assemblies

Completely assembled—ready to install.



CARBURETOR KIT FOR USE WITH HOLLEY'S 4010/4011 CARBURETOR SERIES



Packaged Part Number	Packaged Carburetor Part Number Application		Hose and Fitting Dash Size
FCP0129	Holley 4010/4011	8.25	-06

DUAL FEED HOLLEY CARBURETOR ASSEMBLY



Packaged Part Number	Carburetor Application	Distance Between Bowl Fittings INCHES	Hose and Fitting Dash Size
FCP0101	800 & 850 CFM Holley	9.25	-06
FCP0102	600 & 650 CFM Holley	8.62	-06

1/2% DUAL FEED ASSEMBLY FOR HOLLEY CARBURETORS



Packaged Part Number	Packaged Carburetor Part Number Application		Hose and Fitting Dash Size
FCP0134	750, 800 & 850 CFM Holley	9.25	-08

Bulk or Retail Packaged Parts

The Easy, Quick, and High-Tech Way to Change Your Oil — Eaton's Aeroquip Performance Product's QUICK-DRAIN Oil Pan Coupling

Great for street cars, hot rods, boats, racecars, anything that you need to drain fluid from in a clean and efficient way. Eliminates the potential of spillage drains directly into a waste container. Makes changing your oil quick, clean, and fun!





Flow Rate (17°F 10W30 Oil)

* Approximately 0.24 GPM ** Approximately 0.68 GPM

QUICK-DRAIN OIL PAN COUPLINGS

	Packaged Part Number	Description	Thread Size	A Dimension INCHES	B Dimension INCHES	Hex Size INCHES	Min. Assembly Torque POUNDS/FOOT
	FCM3126 [^]	Full Flow Male Half	1/2-20-UNF-2A*	1.52"	.96"	1 1/16"	20-24†
	FCM3127	Full Flow Male Half	M18 x 1.5 6g*	1.52"	.96"	1 1/4"	20-40†
	FCM3128	Full Flow Male Half	M14 x 1.25 6g*	1.52"	.96"	1 1/16"	20-24†
	FCM3129	Full Flow Male Half	5⁄8-18-UNF-2A*	1.52"	.96"	1 1/16"	20-40†
	FCM3130	Full Flow Male Half	3/4-16-UNF-2A**	1.52"	.96"	1 1/4"	30-50†
	FCM3131	Full Flow Male Half	7/8-14-UNF-2A**	1.52"	.96"	1 1/4"	30-60†
	FCM3132	Full Flow Male Half	M20 x 1.5 6g**	1.52"	.96"	1 1/4"	30-60†
	FCM3133	Full Flow Male Half	M22 x 1.5 6g**	1.52"	.96"	1 1/4"	30-60†
	FCM3134	Full Flow Male Half	1 1/16-12-UN-2A**	1.52"	.96"	1 1/2"	30-60†
	FCM3135	Full Flow Male Half	M12 x 1.5 6g*	1.52"	.96"	1 1/16"	20-24†
	FCM3136	Full Flow Male Half	M14 x 1.5 6g*	1.52"	.96"	1 1/16"	20-24†
	FCM3137	Full Flow Male Half	M12 x 1.75 6g*	1.52"	.96"	1 1/16"	20-24†
	FCM3117	Full Flow Female Half	Fits All	2.34	1.50	_	_
	FCM3118	Replacement Cap	Fits All	0.726	1.25	_	_
	FCM3119	Replacement Gasket	Fits: 1/2-20, M12 x 1.5, M12 x 1.75	_	_	_	_
۱	FCM3120	Replacement Gasket	Fits: M14 x 1.25, M14 x 1.50	_	_	_	_
	FCM3121	Replacement Gasket	Fits 5/8 -18	_	_	_	_
	FCM3122	Replacement Gasket	Fits: 3/4 -16, M18 x 1.50	_	_	_	_
	FCM3123	Replacement Gasket	Fits: M20 x 1.50	_	_	_	_
	FCM3124	Replacement Gasket	Fits: 7/8 -18, M22 x 1.50	_	_	_	_
	FCM3125	Replacement Gasket	Fits: 1 1/16 -12 UN	_	_	_	_
	FBV1000	Blue SOCKETLESS™ Hose (dash 10)		_	_	_	_
	A B # 1 1 1C	1 4 24	P 1 1 2 1 1 4				

[^]Male half comes complete with anodized aluminum cap and gasket

Quick-Disconnect Brake and Clutch Coupling

This coupling allows rapid connection/disconnection of brake and clutch lines without fluid loss, air inclusion and the need to bleed the line. It also includes a safety clip on the lanyard to prevent accidental disconnec-



tion. Available with -03 or -04 S.A.E. 37° (JIC/AN) threads. The male half includes a jam nut for bulkhead mounting. Temperature range -40°F to +250°F. For use with nonpetroleum brake fluids.



HYDRAULIC BRAKE AND CLUTCH COUPLING

Steel Bulk Part Number	Hose Fitting Dash Size	Maximum Operating Pressure	Air Inclusion (C.C. Max.)	Fluid Loss (C.C. Max.)	Length Connector	Total Weight	Seal Material
FBM1073	-03	3000	.02	.10	4.10	.34	EPR
FBM1074	-04	3000	.02	.10	4.25	.36	EPR
Replace	ment P	arts					
FBM1115		-03 Male H	alf (Bulkhea	d Mour	nt)		
FBM1116		-04 Male H	alf (Bulkhea	d Mour	nt)		
FBM1117	'	-03 Female	Half				
FBM1118		-04 Female	Half				

[†]Failure to meet minimum assembly torque could result in fluid leakage. Caution: Do not over torque.

Quick-Disconnect Radiator/ Cooling Refill Coupling





Female Half:

- Aluminum female quickdisconnect coupling is 50% lighter than standard version*
- Viton seals allows higher temperatures
- Stainless steel internal components significantly increase corrosion resistance
- Blue anodized 6061 aluminum body
- Easy connect/disconnect with positive locking
- For use with aluminum male coupling half (FBM1153)

Male Half:

 Replacing previous carbon steel components with stainless steel material significantly improve the corrosion resistance of the popular coupling

- Red anodized 6061 aluminum body
- 54% lighter than standard steel version
- Viton seals allows higher temperatures

RADIATOR/COOLING REFILL COUPLING - 1/2" THREAD

Bulk Number	Description	Working Pressure PSI	Temperature DEGREES F	Weight OUNCES	Seal Material
FBM1153	Male Aluminum Lightweight Quick Disconnect Coupling	250	-15 to +300	1.73	Viton
FBM3113	Female Steel Quick Disconnect Coupling	250	-15 to +300	1.60	Viton
FBM3114	Female Aluminum Quick Disconnect Coupling	250	-15 to +300	3.97	Viton





SPECIFICATIONS

Pressure Sensing Coupling

The primary feature of FCM3080 series Quick-Disconnect coupling is self-sealing valves in both halves, allowing connection and disconnection with minimal fluid loss and virtually no air inclusion. The FCM3080 series quick-disconnect coupling is ideal for gauge, diagnostic, wing and chassis adjustment applications.

ORDERING INFORMATION

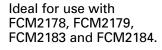
Packaged Part Number	Coupling Body Size INCHES	Description	Thread Size INCHES	Maximum Operating Pressure PSI	Air Inclusion (C.C. Max)	Fluid Loss (C.C. Max)	Length INCHES
FCM3081	1/4	Female Coupling to Female Pipe	1/8-27-NPTF	7000	.02	.1	1.95
FCM3082	1/4	Female Coupling to Female Pipe	1/4-18-NPTF	7000	.02	.1	2.25
FCM3083	1/4	Male Coupling to Male Pipe	1/8-27-NPTF	7000	.02	.1	1.60
FCM3084	1/4	Male Coupling to Male Pipe	1/4-18-NPTF	7000	.02	.1	1.49
FCM3085	1/4	Male Coupling to Female Pipe	1/8-27-NPTF	7000	.02	.1	1.70
FCM3086	1/4	Male Coupling to Female Pipe	1/4-18-NPTF	7000	.02	.1	1.90
FCM3087	1/4	Male Coupling — Dust Cap	_	_	_	_	_

Note: Not for use with brake fluid.

Fuel Check Coupling

Ideal for use to meet NHRA fuel check requirements. Male half mounts in the fuel line.







ORDERING INFORMATION AND SPECIFICATIONS

Packaged Part Number	l Description	Max. Thread Size	Operating Pressure	Air Inclusion (C.C. Max.)	Fluid Loss (C.C. Max.)	Length
		INCHES	PSI			INCHES
FCM3081	Female Coupling to Female Pipe	1/8-27 NPTF	7000	.02	.1	1.95
FCM3083	Male Coupling to Male Pipe	1/8-27 NPTF	7000	.02	.1	1.60

Hydraulic Coupling

PUSH-PULL™ Self-Sealing Couplings are ideal for most hydraulic and fluid applications requiring a quick con-

nect/disconnect coupling. The coupling bodies are constructed of high quality plated steel. Coupling uses Buna-N seals.

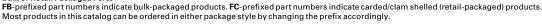




ORDERING INFORMATION AND SPECIFICATIONS

Steel Bulk Part Number	Pipe Thread Size	Max. Operating Pressure	Air Inclusion (C.C. Max.)	Fluid Loss (C.C. Max.)	Rated Flow	Coupled Length	Vacuum Service
		INCHES	PSI		GPM	INCHES	INCHES/HG
FBM3011	1/4-18	5000	.5	.5	1	2.53	28
FBM3012	3⁄8-18	4000	1.5	1.3	6	2.80	28
FBM3013	1/2-14	4000	2.8	2.8	12	3.78	28
FBM3015	3/4-14	4000	10.0	8.2	28	4.56	28
FBM3016	1 11-1/2	4000	14.2	14.2	50	5.54	28

Note: Not recommended for brake system applications.



Aluminum Caps and Plugs for Fitting and Adapter Thread Protection

THREADED ALUMINUM DUST CAPS



	Fitting and		INCHES		
Part	Adapter				Pkg.
Number	Dash Size	Thread	Α	В	Of
FBM3647	-03	3/8-24	.43	.36	20
FBM3648	-04	7/16-20	.54	.46	20
FBM3649	-06	9/16-18	.54	.46	20
FBM3650	-08	3/4-16	.64	.55	20
FBM3651	-10	7/8-14	.74	.65	12
FBM3652	-12	11/16-12	.85	.76	10
FBM3653	-16	15/16-12	.86	.78	10

THREADED ALUMINUM DUST PLUGS



_	Fitting and		INCHES			
Part Number	Adapter Dash Size	Thread	Α	В	С	Pkg. Of
FBM3654	-03	3/8-24	.37	.57	.61	20
FBM3655	-04	7/16-20	.46	.61	.71	20
FBM3656	-06	9/16-18	.50	.76	.77	20
FBM3657	-08	3/4-16	.61	.94	.90	20
FBM3658	-10	7/8–14	.70	1.11	.95	12
FBM3659	-12	11/16-12	.65	1.38	.99	10
FBM3660	-16	15/16–12	.71	1.53	1.08	10

Support Clamps

Vinyl-coated steel support clamps provide security for supporting hose in long runs and critical bends. See hose specifications shown in this catalog for the correct hose clamp to match each hose size. For other hose types, match the clamp I.D. and hose O.D. as close as possible.

Dimensions

624 Firesleeve Hose Cover

Firesleeve hose flame shield can prevent or delay hose lines from burning. See hose specifications shown in this catalog for the correct firesleeve to match each hose size. For other hose styles, select firesleeve with an I.D. slightly larger than the hose O.D.

Dimensions

SPECIFICATIONS



Packaged Part Number	I.D.	Number Per Package
FCM3481	.25	5
FCM3482	.44	5
FCM3483	.50	5
FCM3484	.56	5
FCM3485	.63	5
FCM3486	.75	5
FCM3487	.81	5
FCM3488	.94	5
FCM3534	1.00	2
FCM3535	1.06	2
FCM3536	1.13	2
FCM3537	1.25	2
FCM3538	1.50	2

SPECIFICATIONS



Bulk *Part Number*	I.D.
	INCHES
FBS0700	.44
FBS0800	.50
FBS0900	.56
FBS1000	.62
FBS1100	.69
FBS1200	.75
FBS1300	.81
FBS1400	.88
FBS1600	1.00
FBS1800	1.12
FBS2000	1.25
FBS2200	1.38
FBS2400	1.50

Replacement Aluminum Crushwashers

For use with Banjo Fittings and Carburetor Adapters

SPECIFICATIONS [5 per package]



Packaged Part Number	Dash Size
FCM3642	-03
FCM3513	-04
FCM3514	-06
FCM3515	-08
FCM3627	-09
FCM3516	-10
FCM3517	-12

O-rings

SPECIFICATIONS



10-Piece Package Nitrile1 Part No.	5-Piece Package EPR2 Part No.	Dash Size	D INCHES	E INCHES
FCM3472	FCM3462	-03	.301	.064
FCM3473	FCM3463	-04	.351	.072
FCM3474	FCM3464	-06	.468	.078
FCM3475	FCM3465	-08	.644	.087
FCM3476	FCM3466	-10	.755	.097
FCM3477	FCM3467	-12	.924	.116
FCM3497	FCM3468	-16	1.171	.116
FCM3498	FCM3469	-20	1.475	.118
FCM3499	FCM3470	-24	1.720	.118

 $^{^{2}\}mbox{EPR}$ (Ethylene Propylene Rubber) O-rings to be used with Nitromethane and alcohol fuels.



^{*}Order by the foot. Packaged firesleeve is available in various lengths. Contact customer service for part numbers and prices.

¹Nitrile O-rings for use with gasoline fuels.

PRO CLAMP™ Aluminum Hose Connectors



PRO CLAMP™ connectors are made of red anodized aluminum to give your band clamp connections a professional look. The PRO CLAMP™ connector can be

used on any rubber or stainless steel braid hose. PRO CLAMP™ connectors should not be used on brake lines, air conditioning, power steering or other high pressure

lines. PRO CLAMP™ connectors come complete with a quality band clamp.

SPECIFICATIONS AND ORDERING INFORMATION

Hose Dash Size	Packaged Part Number	Hose I.D. INCHES	Hose O.D. INCHES	
-04 -06	FCM1001	.22	.44	
	FCM1002	.34	.55	
-08	FCM1003	.44	.65	
-10	FCM1004	.56	.80	
-12	FCM1005	.69	.94	

Please see Page 46 for assembly instructions.

SPECIFICATIONS AND ORDERING INFORMATION

Hose Dash Size	Packaged Part Number	Hose I.D. INCHES	Hose O.D. INCHES
-16	FCM1006	.88	1.15
-20	FCM1007	1.13	1.41
-24	FCM1008	1.34	1.70
-28	FCM1010	1.62	1.88
-32	FCM1009	1.75	2.09

Stainless Steel Overbraid



Stainless Steel Overbraid is used to dress up existing rubber hoses. Stainless Overbraid simply slips over current radiator hoses and can be

clamped with the Aeroquip Performance Products PRO CLAMP™ connectors for a finished hose assembly look. Stainless Overbraid provides no additional performance for the hose. Stainless Overbraid does provide added abrasion resistance and good looks.

SPECIFICATIONS ORDERING INFORMATION

Nominal I.D.	Hose O.D. Range	Overbraid I.D.	Bulk Part Number	Part				
INCHES	INCHES	INCHES		3 Feet	6 Feet	10 Feet	15 Feet	20 Feet
3/4	1/2 to 1	3/4	FBR1200	FCR1203	FCR1206	FCR1210	FCR1215	FCR1220
1 1/2	1 1/2 to 2 1/4	1 1/2	FBR2400	FCR2403	FCR2406	FCR2410	FCR2415	FCR2420

Please see Page 46 for assembly instructions.

Stainless Steel Internal Support Coils

Extra support for extreme vacuum applications.

SPECIFICATIONS AND ORDERING INFORMATION

Hose Dash Size	Bulk Part Number	Description	Length Feet	
-08	FBM3412	.51" OD	20	
-12	FBM3413	.73" OD	20	
-16	FBM3414	.94" OD	20	





Vacuum: One of the most severe applications of a hose is in vacuum service. Modern dry sump oil systems are pulling more vacuum than ever. It is extremely important that you match the hose you are using with the vacuum rating of your application. Eaton offers racing hoses with vacuum rating of up to 28 in./HG (Check hose specifications for vacuum rating). Great care should be taken in the handling and routing of hoses used in vacuum service. If a hose is installed beyond the minimum bend radius the vacuum rating will be reduced. Also, if a hose has been kinked or damaged and then put in vacuum service, the area that was kinked or damaged will be a weak spot and the vacuum rating of the hose will be reduced. For severe vacuum applications, an internal support coil may be needed. Contact Eaton Technical Support for additional information.

Toggle Switches

Switches with the widest selection of features and design flexibility

These environmentally sealed toggle switches offer the widest selection of features and the design flexibility to meet a variety of performance applications. Our product is designed to meet Aerospace specifications, delivering the quality and level of consistent execution that is above all others.

All Eaton's Aroquip® Toggle switches are completely sealed to moisture, dust, grease and a variety of other contaminants that can be harmful to the inner electronics. Don't take a chance with your vehicle's equipment, go with the name you trust, use Eaton's Aeroquip Performance Products.

Features and Benefits

- Completely sealed against dust, moisture and other contaminants
- One, two and three pole circuitry
- · One hole mounting for easy installation
- Multi-circuits offered
- Two and three position with maintained and momentary action
- · Molded-in terminal inserts
- · Molded-in terminal numbers



Applications

- · Ignition/Start
- · Accessory Controls: lights, pump, fan, etc.

Specifications

- Water-tight seal per MIL-STD-108E and designed to meet IP68
- Thermoset molding materials meet flame retardant requirements
- Temperature range: -500°F to +1500°F (-460°C to +660°C)
- · Life: 20,000 operations at rated load
- Bushing: 15/32" -32 thread

CURRENT RATINGS

			28VDC			115VAC	60 or 400Hz	
No of Poles	Catalog No.	Type of Operation	Lamp Load	Resistive Load	Inductive Load	Lamp Load	Resistive Load	Inductive Load
1	8510	Maintained	5	20	15	3	15	10
		Momentary	4	15	10	2	15	7
2	8511	Maintained	7	20	15	4	15	15
		Momentary	5	18	10	2	11	8
4	8512	Maintained	5	20	12	4	15	15
		Momentary	4	18	10	2	11	8

Up Position	Center Position	Down Position Position (Keyway)	Catalog Number	Catalog Number	Catalog Number
ON	OFF	ON	8510K1	8511K1	8512K1
ON	NONE	OFF	K9	K9	K9
ON	NONE	ON	K4	K4	K4
ON	OFF	NONE	K6	K6	K6
ON	OFF*	NONE	K8	K8	K8
ON	NONE	ON*	8510K5	8511K5	8512K5
ON*	0FF	ON*	K2	K2	K2
NONE	0FF	ON*	K7	K7	K7
ON	NONE	0FF	K10	K10	K10
OFF	NONE	ON*	K11	K11	K11
ON	0FF	ON*	8510K3	8511K3	8512K3
0N*	ON	NONE	K12	K12	K12
ON	ON	NONE	K13	K13	K13
ON	ON	ON	_	8511K14	8512K16
ON	ON	ON*	_	K15	K16
0N*	ON	ON*	_	K16	K17
ON	ON	ON	_	8511K17	
ON	ON	ON*	_	K18	
ON*	ON	ON*	_	K19	_

Catalog number 8497KIC switch gaurd prevents accidental operation of switches in safety-critical applications. *Momentary contact



Port and Identification Kit

FCM3644

To help mechanics, engineers and salespeople quickly and accurately identify ports and connectors used in racing plumbing, Performance Products is offering the FCM3644 Port and Identification Kit. Measuring and identifying both USA and foreign threads is made easy. The kit consists of five components:

- A unique caliper, featuring four angle gauges that are built into the ID/OD measuring fingers. Angles include 37,° 45,° 12° (24° included) and 30° (60° included).
- Bulletin JA 110, How to Identify Fluid Ports and Connectors. This bulletin provides port and connectors information with inch dimensions given in both fractions and decimals. Metric dimensions are given in both millimeters and inch decimals.
- 3. A handy, compact thread gauge, featuring 14 fold out blades with the following pitches per inch: 11, 11 1/2, 12, 14, 16, 18, 19, 20, 24, 27, and 28. Metric 1.0, 1.5 and 2.0 thread pitches are also included.
- 4. A flexible Fresnel magnifying lens (3x) for hard-to-read part numbers.
- 5. A vinyl pocket size carrying case.



Hand-Held Hose Cutter

FCM3362

Cut-Off Tool

FT1258

Bench mounted cut-off tool for all non-wire reinforced hose.

Eaton's hand-held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as Eaton's Aeroquip Performance Products StartLite® and SOCKETLESS™ hose styles. The cutter's compact size makes it ideal for working in confined areas. It provides fast, accurate easy cuts—every time.

- Features a replaceable stainless steel blade that closes into its own handle for safe carrying and handling
- Includes tough, durable nylon handles
- Offered with an optional tool pouch
- · Saves time and effort due to its small size and lightweight design



SPECIFICATIONS AND ORDERING INFORMATION

Part Number	Description
FCM3662	Hand-Held Hose Cutter
FCM3663	Replacement Blade
FCM3664	Tool Pouch





The rotating/rocking technique produces fast easy cuts.



Aluminum wrenches, FCM3410, and vise jaw inserts, FCM3661, are great for protecting the anodized coloring on your reusable fittings. Check out the assembly equipment section for more details...

SOCKETLESS™ Fitting Assembly Tool

FBM3632

The FBM3632 hand-held assembly tool is especially designed for quick and easy assembly of FBV SOCKETLESS Hose in sizes -04, -06, and -08. The hose is held in position by a manually operated clamp, and the fitting is positioned on the mandrel assembly lever. The SOCKETLESS fitting is pushed into the hose by compressing the mandrel assembly lever.



Teflon* Hose Tool

FBM3646

The FCM3646 hand-held tool is designed to seat Teflon* tube against a sleeve. Use with smooth bore Teflon* hose in sizes -03, -04, -05, -06, -08, -10 and -12.



Aluminum Wrenches

FCM3410

Sturdy, anodized aluminum wrenches are designed to fit the hexes and minimize marking of Aeroguin

Aeroquip Performance Products

anodized aluminum fittings for AQP® Racing Hose in sizes 6 through -20.

Color coded by size.

Hose Assembly Lube

FBM3553

Eaton's Aeroquip Performance Products Hose Assembly Lube is a specially compounded lubricant superior to any other lubricant used in hose assembly work. Available in pint containers. Use for either hand or machine assembly.



Vise-Jaw Inserts for Anodized Fitting Protection

FCM3661

FCM3661 vise-jaw inserts are a must for race teams, engine builders and street rodders. Keep your good-looking Aeroquip Performance Products fittings looking good even after assembly. FCM3661 vise-jaw inserts firmly hold the hex of the fitting during assembly, without marring the anodized finish. Made of aluminum with angled pockets, FCM3661 vise-jaw inserts can be used with any size fitting from -03 to -32.

A horizontal pocket the length of FCM3661 vise-jaws is ideal for securely holding steel braided hose in place, making straight cuts fast and simple.



*Teflon is a registered trademark of Dupont and under license by Eaton.



ET1000 — Portable Crimp Machine

Relaunched with a sleek new housing, the new high performance crimper will compliment your high performance shop, race trailer, or garage.

This crimp machine has been approved to crimp:

- Eaton Aeroquip AQP® Racing and StartLite® hose in sizes

 4 through -16, straight through 120° swivel. The StartLite hose is also qualified in -20 swivel.
- Aeroquip Racing Hose, Teflon* in –3, -4 and -6 sizes, straight through 90°

The performance version of the ET1000 builds on the success of Eaton portable crimp machines by using a 2-piece split half collet assembly in lieu of traditional one-piece die cages. The correct hose assembly crimp diameter is obtained by the use of a spacer ring that controls the stroke length of the cylinder during the crimping operation.

This ET1000 may be ordered separately or with one of one of two different power sources: a two-stage hand pump or the Air-Hydraulic pump. The crimper housing has been expanded to allow for a direct mount on the pump to the housing.

SPECIFICATIONS

Dimensions	22" high, 16" wide, 14" in depth		
Weight	80 lbs. (without pump)		
ET1000 CDIMD MACHINE DADT NI IMPEDO			

ET1000 CRIMP MACHINE PART NUMBERS

ET1000-PHP-002 No pump, no tooling (basic machine only)

ET1000 CRIMP MACHINE PACKAGE PART NUMBERS

These machine packaged part numbers offer a variety of pumps with the same tooling package including all collets and spacer rings to crimp:

- AQP Racing & StartLite Hoses (sizes -4 thru -16), straight through 120° swivel fittings.
- AQP StartLite has been qualified up to -20, straight through 120° swivel fittings.
- Aeroquip Racing Hose, Teflon* (sizes -3, -4 and -6), straight fitting.

ET1000-PHP-012	ET1000-PHP-002 with hand pump. Includes collet and spacer ring tooling packages
ET1000-PHP-013	ET1000-PAP-003 with air/hydraulic pump. Includes collet and spacer ring tooling packages

Features

- · Pusher slides out of position.
- Red power coated housing protects user from moving machinery and providesx a sleek, aerodynamic design
- Crimper body has a clear zinc finish to protect against corrosion.
- Utilizes 2-piece collet assemblies.
- · Spacer rings control the crimp diameter.
- Qualified to crimp Aeroquip's top selling hoses: AQP Stainless Braid, StartLite, and Teflon hoses with Aeroquip'a qualified aluminum crimp fittings.

Benefits

- Sliding pusher allows for easier fitting insertion into the machine.
- Simple positive-stop crimp diameter control system for consistent crimping time after time with no operator adjustments required.
- · Easily transported between job sites.
- Versatile power source options. Electricity is required only when using an electric style pump.

COLLET PART NUMBERS

COLLET TAUTH HOME	001111111111111111111111111111111111111				
T-400-2C	T-400-5C				
T-400-3C	T-400-6C				
T-400-120C					
ET1000DC-M065S	ET1000DC-M195S				
ET1000DC-M150S	ET1000DC-M1230S				
ET1000AR-001(Die Ring Adapter)					

SPACER RING PART NUMBERS

ET1010SR-M305A	ET1010SR-M205A	
ET1010SR-M100A	ET1010SR-M055A	
ET1010SR-M115D	ET1010SR-M240D	
ET1010SR-M395D		

ACCESSORY PART NUMBERS

140-06701	15 oz Tube	high efficiency	PTFF grease

Hose Style	Hose End	Collet Assembly	Spacer Ring P/N	Flat Side (Up/Down)	Crimp Diamete Range (in)	er	Die Ring Adapter Required
FBA0400	Lightweight Crimp	T-400-2C	ET1010SR-M305A	FSU	0.488	0.498	Yes
FBU0400	Lightweight Crimp	T-400-2C	ET1010SR-M305A	FSU	0.488	0.498	Yes
FBA0600	Lightweight Crimp	ET1000DC-M150S	ET1010SR-M100S	FSU	0.609	0.619	Yes
FBU0600	Lightweight Crimp	ET1000DC-M150S	ET1010SR-M100S	FSU	0.609	0.619	Yes
FBA0800	Lightweight Crimp	T-400-3C	ET1010SR-M055A	FSU	0.715	0.725	Yes
FBU0800	Lightweight Crimp	T-400-3C	ET1010SR-M055A	FSU	0.715	0.725	Yes
FBA1000	Lightweight Crimp	ET1000DC-M195S	ET1010SR-M395D	FSU	0.891	0.901	Yes
FBU1000	Lightweight Crimp	ET1000DC-M195S	ET1010SR-M395D	FSU	0.891	0.901	Yes
FBA1200	Lightweight Crimp	ET1000DC-M230S	ET1010SR-M395D	FSU	1.015	1.025	Yes
FBU1200	Lightweight Crimp	ET1000DC-M230S	ET1010SR-M395D	FSU	1.015	1.025	Yes
FBA1600	Lightweight Crimp	T-400-5C	ET1010SR-M240D	FSU	1.200	1.210	Yes
FBU1600	Lightweight Crimp	T-400-5C	ET1010SR-M240D	FSU	1.200	1.210	Yes
FBU2000	Lightweight Crimp	T-400-6C	ET1010SR-M115D	FSU	1.460	1.470	Yes
FBC0300	Steel Crimp	ET1000DC-M065S	ET1010SR-M205A	FSU	0.272	0.278	Yes
FBC0400	Steel Crimp	ET1000DC-M065S	ET1010SR-M115D	FSU	0.334	0.340	Yes
FBC0600	Steel Crimp	T-400-120C	ET1010SR-M055A	FSU	0.464	0.470	Yes

^{*}Teflon is a registered trademark of DuPont and under license by Eaton.



ASSEMBLY EQUIPMENT (CONT.)

ProCrimp® 1380

The ProCrimp FT1380 is the industry's easiest and fastest means of assembling Eaton's Aeroquip Performance Products hose and fittings. The ProCrimp 1380 is electronically controlled to give fast, accurate crimps each and every time you need a hose assembly.

FT1380 DIE CRIMP ORDERING INFORMATION

FT1380-1-1	Includes machine, five die cages (-4, -16), instruction video.
FT1380-115	Crimp machine only.
FT1380-275-M370	-20 crimp die cage

Features

- · Fast, quite easy to use
- Crimp -4 through -20, 4-spiral hose
- Crimps Eaton's Aeroquip Performance Products StartLite® and AQP® Racing Hose, and Racing Hose, Teflon*
- · Pre-set crimp settings
- Programmable electronic controls
- · Easy to calibrate
- · Upright design
- Standard work light
- · Simple die cage insertion
- · Full flow hydraulics with spring return
- · "Soft" retract position
- ENERPAC® hydraulics

Benefits

- · Minimizes training and mistakes
- · Crimp popular hose styles
- · Fast setup time
- Simplified crimping
- Minimal maintenance
- · Minimal effort calibrating machine
- · Easy hose insertion
- Easy to see work
- Fast cycle time
- Minimum cycle distance and time
- Reliable/serviceable/standardized

Eaton ProCrimp® 1380 sets a new standard for simplified, fast crimping of hose assemblies. This machine can be set up in any shop, garage or work area to crimp 1 and 2 wire braid, 4 spiral, and many other hose stlyles offered by Eaton.



The ProCrimp® 1380 is totally compatible with Eaton's MatchMate® Plus hose assembly program. Matching and mating hose to fittings and to the tooling in the ProCrimp® 1380 make hose assembly simpler than ever. Decals have been prepared to fit the ProCrimp® 1380 with all of the MatchMate Plus hose styles, including MatchMate BLUE®

The standard work light on the ProCrimp® 1380 illuminates the top of the fittings being crimped in this upright crimp machine. The work area is highly visible due to the upright design. Viewing of the fitting during the crimping operation is easier than ever. And the ever popular FT1330XL "Oxley Locater" can be added to the die cages for use with MatchMate Plus TTC fittings for even easier location.

The ProCrimp® 1380 uses an ENERPAC® 10,000 psi hydraulic pump and cylinder which provide quiet, efficient crimping. When the power unit is on, the electronic display and work light are lighted to indicate setup for crimping. The pump doesn't actually begin to operate until the crimp toggle switch is activated, saving energy and motor wear.

^{*}Teflon is a registered trademark of DuPont and under license by Eaton.



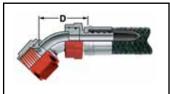
X

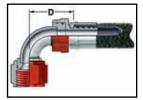
How To Determine Hose Assembly Lengths

To determine the "J" length (cut length of hose) from "L" length (overall length), deduct "D" dimensions of both end fittings. Consult fitting information tables for "D" dimensions.

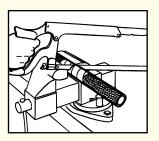


L = Overall Length
J = Cut Length of Hose
D = Fitting Length

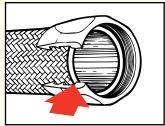




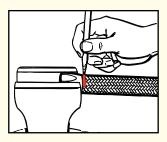
AQP Racing Hose (with Reusable Fittings)



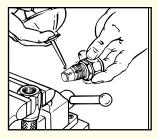
Step 1. Cut hose square to length with fine-tooth hack saw or cut-off wheel. To minimize wire braid flare out, wrap hose with masking tape and cut through tape. Remove tape before next step.



Step 2. Insert hose in socket with twisting, pushing motion until hose is in line with back of socket threads.



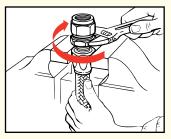
Step 3. Important—Mark position around hose at rear of socket with a grease pencil, paint or tape.



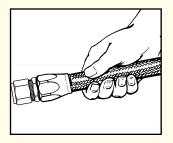
Step 4. Lubricate inside of hose and nipple threads liberally using S.A.E. 30 lubricating oil or Aeroquip FBM3553 Hose Assembly Lube.



Step 5. Carefully insert nipple and engage nipple and socket threads while holding hose in position with other hand. Make sure hose does not push out of socket by observing mark made in Step 3.



Step 6. Complete assembly using wrench while continuing to hold hose in position. Maximum allowable gap is .031 inches. Your thumbnail is a convenient measuring device.



Step 7. Important—Check hose for pushout by observing hose position mark. Pushout should not be evident. CLEAN, PROOF TEST TO TWICE OPERATING PRESSURE AND INSPECT ALL ASSEMBLIES. Disassemble in reverse order.



Eaton's Aeroquip Performance Products Hose Assembly Lube is a specially compounded lubricant superior to any other lubricant used in hose assembly work. Available in pint containers.

Use for either hand or machine assembly.

StartLite Racing Hose and AQP Racing Hose (with Lightweight Crimp Fittings)

ProCrimp® 1380 Crimp Machine

The ProCrimp 1380 machine is designed to assemble StartLite and AQP® Racing Hose assemblies. It is electronically controlled to give fast, accurate crimps and incorporates programmable crimp settings and a simple die cage insertion to reduce setup time and errors.

ProCrimp® 1380 Target Settings

The target settings for Eaton's Aeroquip Performance Products crimp machines are provided to aid in establishing actual settings. While the settings on this chart will give crimp diameters close to, or at, specified value, the machine operator must check to verify the actual diameter. Before using these target settings, the crimp machine must be within proper calibration. If needed, consult your Eaton Aeroquip Performance Products equipment manual for calibration procedures.

PROCRIMP 1380 CRIMP MACHINE TARGET SETTINGS

IANGELO			
Hose Dash Size	Die Cage	Crimp Diameter (±.005 Inches) INCHES	Target Setting
-04	-M120	.493	088
-06	-M150	.614	078
-08	-M150	.719	187
-10	-M210	.896	142
-12	-M240	1.020	116
-16	-M280	1.205	155
-20	-M370	1.465	040

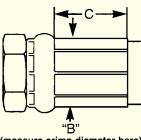
Note: It is recommended that all hose assemblies be proof pressure checked at twice the operating pressure using a proof test stand such as the Eaton's Aeroquip Performance Products FT1058 stand.

To ensure a proper crimp, the StartLite and AQP Racing Hose (FBU & FBA) must have a clean cut with no frayed ends and must be fully inserted into the fitting. Position your scribe line level with the top of the die. Follow target setting for the size of hose to be crimped. Check your crimp diameter with a dial caliper.

Prese the

Crimp Diameter Measurement Locations

Diameter measurements are to be taken at the center (top to bottom, side to side) of the specified fitting selection.



(measure crimp diameter here)

Determining Crimp Diameter

The crimp diameter is the average of the four diameter measurements around the fitting. These measurements are to be taken at the same relative locations indicated in the illustration above right.

 $\frac{\text{Measurement 1 + Measurement 2 + Measurement 3 + Measurement 4}}{4} = \frac{\text{Crimp}}{\text{Diamete}}$

StartLite Racing Hose (with Reusable Fittings)



Step 1. Cut hose square to length with Aeroquip Performance Products Cut Off Tool (FT1258) or similar cutting device.



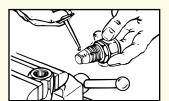
Step 5. Complete assembly using wrench while continuing to hold hose in position. Maximum allowable gap is .031 inches. Your thumbnail is a convenient measuring device. Do not overtighten to a point where there is no gap.



Step 2. Insert hose in socket with twisting, pushing motion until hose is in line with back of socket threads.

Notes

- Greater resistance can be expected as compared to Aeroquip Performance Products AQP[®] Racing Hose.
- To disassemble, reverse steps.
- It is recommended that all hose assemblies be proof pressure checked at twice the operating pressure using a proof test stand such as the Aeroquip Performance Products FT1058 stand.



Step 3. Lubricate inside of hose and nipple threads liberally using S.A.E. 30 lubricating oil or Aeroquip Performance Products FBM3553 Hose Assembly Lube. and socket threads while holding hose in position with other hand. Make sure hose does not push out of socket.

FBM3553 Hose Assembly Lube

Aeroquip Performance Products
Hose Assembly Lube
is a specially compounded lubricant
superior to any other
lubricant used in
hose assembly work.
Available in pint containers.

Use for either hand or machine assembly



Step 4. Carefully insert nipple and engage nipple and socket threads while holding hose in position with other hand. Make sure hose does not push out of socket.

StartLite® Hose Routing Procedure

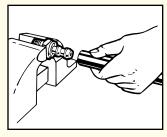
In most vibration applications, it may be necessary to restrain, protect, or guide the hose to protect it from damage caused by unnecessary flexing or contact with other mechanical components. Care must be taken to ensure such restraints do not introduce additional stress or wear points. StartLite® hose, when used with reusable fittings in a high vibration applications, should be supported approximately every 12 to 14 inches.



SOCKETLESS™ Hose¹

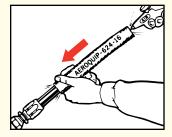


Step 1. Cut hose to required length with a sharp knife. Oil inside of hose and outside of nipple liberally.



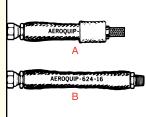
Step 2. Push hose on fitting until hose end bottoms underneath protective cap as shown. Clean, proof test to twice operating pressure and inspect all assemblies.

Firesleeve



Step 1. Follow the appropriate hose assembly instructions through the assembly of one end fitting. Cut firesleeve to same length as hose. Start firesleeve over cut end of hose.

Note: If applying sleeve over Teflon* or stripped cover assemblies, wrap exposed wire with tape. Grasp sleeve and slip over the hose assembly as illustrated.

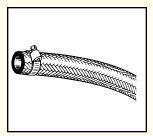


Step 2. Skin sleeve back from cut end of hose enough to allow assembly of second end fitting. (2A)

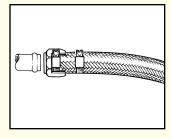
Then center sleeve so that it completely covers both sockets. (2B)

Step 3. Position nylon wire tie or band clamp over sleeve on each end of the hose assembly and draw tight.

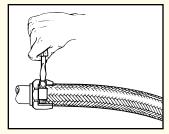
Pro Clamp™



Step 1. Slide clamp onto hose.

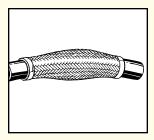


Step 2. Push cap (socket) onto hose until it bottoms. Then slide clamp under cap.

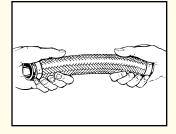


Step 3. Push assembly onto beaded tube. Position clamp for appearance. Tighten with a screwdriver.

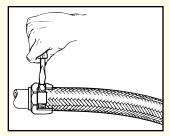
Overbraid



Step 1. Disconnect the radiator hose. Slide overbraid over the radiator hose.



Step 2. Stretch until snug, mark length and cut with tin snips.

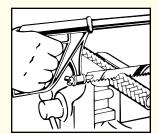


Step 3. Reconnect radiator hose and secure hose and overbraid with clamp or ProClamp clamp.

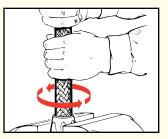
¹Never use a hose clamp with FBV $SOCKETLESS.^{TM}$

——Aeroquip ⊕@@

AQP High Pressure Hose (Power Steering)

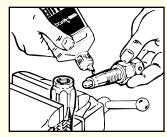


Step 1. Cut hose square with fine-tooth hacksaw or cut-off wheel.



Step 2. Put socket in vise.
Screw hose counterclockwise into socket until it bottoms.
When assembling long lengths of hose, it may be preferred to put hose in vise just tight enough to prevent from turning, and screw socket onto the hose counterclockwise until it bottoms. Back off 1/4 turn.

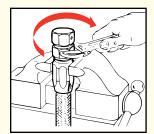
Note: It is recommended that all hose assemblies be proof pressure checked at twice the operating pressure using a proof test stand such as the Aeroquip Performance Products FT1058 stand.



Step 3. Male Ends: Push assembly tool into nipple.

Swivel Ends: Tighten nipple and nut on assembly tool.

Lubricate nipple, mandrel and inside of hose liberally with Aeroquip Performance Products assembly lube.



Step 4. Male Ends: Screw nipple clockwise into socket and hose. Leave a 1/32∀ clearance between nipple hex and socket.

Swivel Ends: Screw nipple clockwise into socket and hose. Leave 1/32∀ to 1/16∀ clearance between nut and socket. Clean, proof test to twice operating pressure and inspect all assemblies.

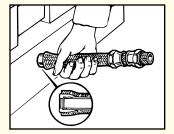
To disassemble: Reverse steps.

Racing Hose, Teflon* with Reusable Fitting

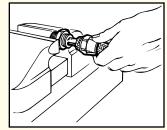


Step 1. Cut hose square to length with fine-tooth hack saw or cut-off wheel. To minimize wire braid flare out, wrap hose with masking tape and cut through tape. Remove tape, trim loose wires and flush with lube before next step. Burrs on bore of tube should be removed with a knife. Clean the hose bore.

Sometimes wire braid hose will "neck down" on one end and "flare out" on the other end. This can be used to an advantage. Slip two sockets back to back over the "necked down" end of the hose, position approximately 3 inches from each end. Mount nipple hex in a vise. Work the hose bore over the nipple to size the tube and aid in separating the braid prior to fitting the sleeve. Remove hose from nipple.



Step 2. Push the sleeve over the end of the tube and under the wire braid by hand. Complete positioning of the sleeve by pushing the hose end against a flat surface. Visually inspect to see that the tube butts against the inside shoulder of the sleeve. Set the sleeve barbs into the Teflon* tube by pushing a round nose tapered punch into the end of the sleeve and tube.



Step 3. Lubricate nipple and socket threads. Use a molydisulfide base lubricant for stainless steel fittings (e.g. Molykote Type G); lubricants containing chloride are not recommended. Other material combinations use standard petroleum lubricants. Hold the nipple with hex in the vise. Push hose over nipple with twisting motion until seated against nipple chamfer. Push socket forward and start threading of socket to nipple.



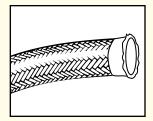
Step 4. Wrench tighten hex until clearance with socket hex is at .031 inches. Your thumbnail is a convenient measuring device. Tighten further to align corners of nipple and socket hexes. CLEAN, PROOF TEST TO TWICE OPERATING PRESSURE AND INSPECT ALL ASSEMBLIES.

To disassemble: Unscrew and remove nipple; slide socket back on hose by tapping against flat surface; remove sleeve with pliers.

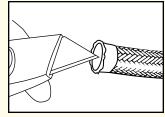
Important: Fittings may be disassembled and reused at least once. However, all such fittings should be carefully examined for distortion, thread damage and I.D. dimensions. New sleeve is recommended upon reuse of fitting.

Replacement brass sleeves are available. Refer to Page 15.

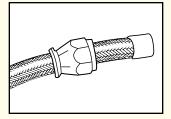
A/C Hose and Fittings



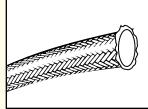
Step 1. Wrap a piece of tape around the hose twice and mark to the correct length for cutting. Using a cut-off saw, cut the hose through the tape where marked. This must be a clean, straight cut.



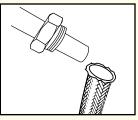
Step 2. Using a knife, remove any burrs or debris from the end of the hose. Clean the hose out thoroughly before assembling fittings.



Step 3. Once the hose is cut and cleaned, insert the hose through the socket (the threads should be facing in the direction that the nipple will be inserted).



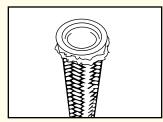
Step 4. With the socket slid on the hose, remove the tape. Be sure to remove all of the tape. Use a knife if necessary.



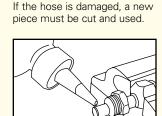
Step 5. Insert the FT1038A hose tool or fitting nipple gently into the end of the hose.



Step 6. Using a slow rotating motion, roll the hose tool or fitting nipple around inside the hose so that the braid separates from the tube as shown. Be careful not to stretch the tube out too much, or it will not fit into the sleeve in Step 7.

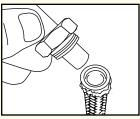


Step 7. Push the sleeve over the end of the blue tube and under the wire braid by hand. Complete positioning of the sleeve by pushing the hose end against a flat surface. Visually inspect to see that the tube stock butts against the O-ring

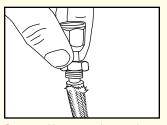


on the inside of the sleeve. Be careful not to kink or damage the hose during this process.

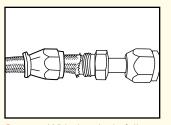
Step 8. Lubricate the nipple with refrigerant oil.



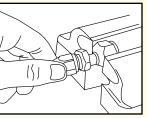
Step 9. Insert the lubricated nipple into the hose.



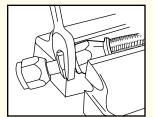
Step 10. Use a rotating motion until the nipple has bottomed out into the sleeve. Be very careful not to kink or crush the hose.



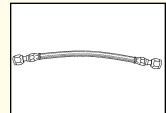
Step 11. With the nipple fully inserted, slide the socket back up the hose to the nipple threads.



Step 12. Hand tighten the socket to the nipple.



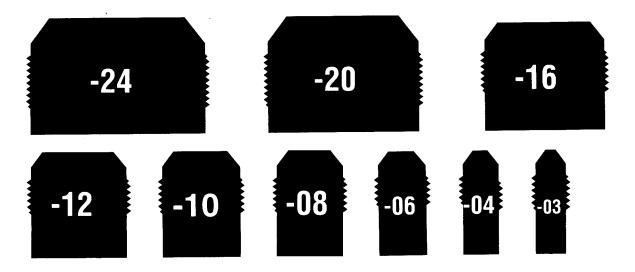
Step 13. Using a wrench, tighten the nipple the rest of the way onto the socket. It is ok if the hose rotates during this process. Be careful not to over-tighten the threads, this could cause stripping.



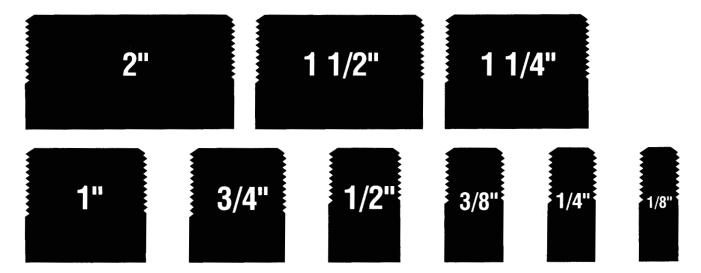
Step 14. Repeat Steps 2 thru 13 to complete the other end of hose assembly. Once assembled, remove any contaminants from the hose before installing it into the A/C system.

Actual Fitting Sizes

SAE 37° AN FITTINGS



PIPE THREADS



"Dash" Size/Fractional Equivalent Guide

The following chart gives fractional equivalents to hose and fitting dash

sizes. Dash sizes are the numerators of fractions with a denominator of 16. For example, -08 is equal to 8/16 which is equal to 1/2.

DASH SIZE/FRACTIONAL EQUIVALENT GUIDE

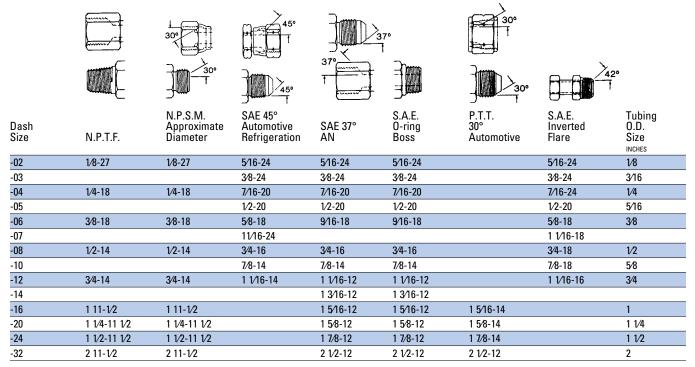
DASH SIZE/FRACTIONAL EQUIVALENT GUIDE		
S.A.E. 37° (AN) Dash Size	Nominal Fractional Equivalent INCHES	
-02	1/8	
-03	3/16	
-04	1/4	
-05	5/16	
-06	3/8	
-08	1/2	
-10	5⁄8	

DASH SIZE/FRACTIONAL EQUIVALENT GUIDE

S.A.E. 37° (AN) Dash Size	Nominal Fractional Equivalent
-12	3/4
-14	7/8
-16	1
-20	1 1/4
-24 -32	1 1/2
-32	2

Thread Size Chart

The following chart is intended as a quick reference guide for thread size by dash size.



Through Hole Dimensions

All dimensions are nominal. In jump size bodies, minimum through hole dimensions will correspond to the smallest dash size.

E THROUGH HOLE

S.A.E. 37°

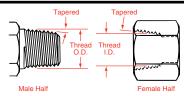


E Through Hole

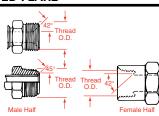
Dash Size	S.A.E. 37°
-03	.12
-04	.17
-05	.23
-06	.30
-08	.39
-10	.48
-12	.61
-16	.84
-20	1.08
-24	1.31
-32	1.78

Common Thread Connections

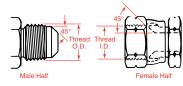
NPTF (NATIONAL PIPE TAPERED FUEL)



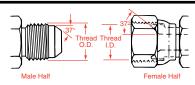
S.A.E. INVERTED FLARE



S.A.E. 45°



S.A.E. 37° (AN)



Torque Specifications for Aluminum Fittings

One of the most frequently asked questions is how tight should the connection between the fitting and the adapter be?

The correct answer is to follow the specification guidelines listed below. This will give the proper tightness to allow for a good seal, but prevents damage to the fitting by over torque.

TORQUE SPECIFICATION GUIDELINES

Nut Size	Minimum Torque1	Maximum Torque ¹	
-02	50	80	
-03	70	105	
-04	100	140	
-05	130	180	
-06	150	195	
-08	270	350	
-10	360	430	
-12	460	550	
-16	700	840	
-20	850	1020	
-24	900	1080	
-32	1800	2000	

¹Torque values are shown in inch pounds for aluminum fittings.

There may be times when the correct torque wrench may not be available. In these cases you can follow one of the alternate tightening methods listed at right. Please note that these methods are for aluminum

performance fittings and adapters.

Remember, overtightening will result in possible damage to the fitting, resulting in possible leaks.

Conversion Tables

INCH AND MILLIMETER EQUIVALENTS

				_	
Inches Fractions	Inches Decimals	Millimeters Decimals	Inches Fractions	Inches Decimals	Millimeters Decimals
1/64	.016	.397	7/32	.219	5.556
1/32	.031	.794	15/64	.234	5.953
3/64	.047	1.191	1/4	.250	6.350
1/16	.063	1.588	17/64	.266	6.747
5/64	.078	1.984	9/32	.281	7.144
3/32	.094	2.381	19/64	.297	7.541
7/64	.109	2.778	15/16	.313	7.938
1/8	.125	3.175	21/64	.328	8.334
9/64	.141	3.572	11/32	.344	8.731
5/32	.156	3.969	23/64	.359	9.128
11/64	.172	4.366	3/8	.375	9.525
3/16	.188	4.763	25/64	.391	9.922
13/64	.203	5.159	13/32	.406	10.319

ALTERNATE TIGHTENING METHOD ONE

Flats Method

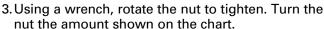
Here are the steps for an excellent method of tightening. Anyone can tell if the joint was tightened and how much.

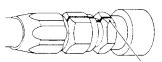
- 1. Tighten the nut by hand until it bottoms the seats.
- 2. Using a marker, draw a line lengthwise on the

nut and extend it onto the adapter.

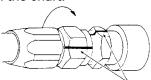
Hex Flats Size Rotations -04 1 1/2 to 1 3/4 -06 1 to 1 1/2 -08 1 1/4 to 1 3/4 1 1/4 to 1 3/4 -10 -12 1 to 1 1/2 3/4 to 1 -20 1/2 to 3/4 1/2 to 3/4

Number of





Mark a line on the nut and adapter before torquing.



Misalignment of the mark shows the amount which the nut was tightened.

Alternate Tightening Method Two

The second alternate method of tightening is very simple and easy to remember. Bring the nut to hand tight and then rotate a quarter of a turn. This applies to all sizes. Mark the fitting as indicated in the flat method to confirm the quarter turn.

CONVERTING UNITS OF MEASURE

To Obtain

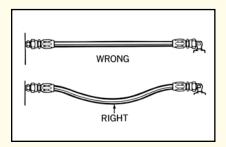
Βv

Multiply

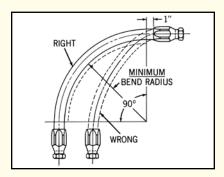
iviaicipiy	D y	10 Obtain
Atmospheres	14.70	Pounds/ square inch
Atmospheres	1.013	Bars
Bars	0.9869	Atmospheres
Bars	14.50	Pounds/ square inch
Centimeters	0.3937	Inches
Feet	0.3048	Meters
Gallons	231	Cubic inches
Gallons	3.785	Liters
Gallons (Imperial)	1.20105	U.S. gallons
Gallons (U.S.)	0.83267	Imperial gallons
Gallons (water)	8.3453	Pounds of water
Gallons/ feet/hour	8.0208	Cubic minute
Horsepower	745.7	Watts
Inches of mercury	1.133	Feet of water
Kilometers	0.6214	Miles
1.5	0.00004	Cubic feet
Liters	0.03531	Cubic feet

SUKE		
Multiply	Ву	To Obtain
Liters	0.2642	Gallons
Meters	3.281	Feet
Meters	39.37	Inches
Microns	10 ⁻⁶	Meters
Miles	5280	Feet
Miles	1.609	Kilometers
Miles/hour	1.609	Kilometers/ hour
Miles/hour	0.8684	Knots
Ounces	0.0625	Pounds
Ounces	28.34952	Grams
Ounces (fluid)	1.805	Cubic inches
Ounces (fluid)	0.02957	Liters
Pounds	453.5924	Grams
Pounds of water	0.1198	Gallons
Pounds/ square inch	0.06804	Atmospheres
Temp. (°C)	1.8	+32 Temp. (°F)
Temp. (°F) -32	2	5/9
Temp. (°C)		

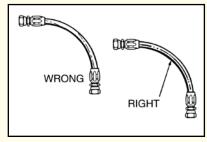
Hose Routing and Installation



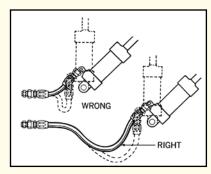
Under pressure, a hose may change in length. Always provide some slack in the hose to allow for this shortening or elongation. (However, excessive slack in hose lines may cause poor appearance.)



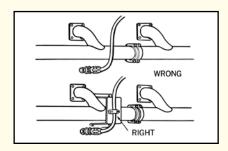
At bends, provide sufficient hose so that it does not have a bend radius less than its recommended minimum bend radius. Too tight a bend may kink the hose and restrict or stop the fluid flow. In many cases, the proper use of adapters and hose fittings can eliminate tight bends or kinks.



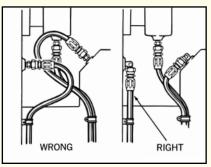
If a hose is installed with a twist in it, operating pressures tend to force it straight. This can loosen the fitting nut. Twisting can cause reinforcement separation, and the hose could burst at the point of strain.



In applications where there is considerable vibration or flexing, allow additional hose length. Metal hose fittings, of course, are not flexible, and proper installation protects metal parts from undue stress and avoids kinks in the hose.



When hose lines pass near an exhaust manifold or other heat source, they should be insulated by a heat resistant boot, firesleeve or a metal baffle. In any application, brackets and clamps keep hose in place and reduce abrasion. For installations where abrasion to the hose cover cannot be prevented with the use of clamps or brackets, a steel protective coil or abrasion resistant sleeve should be placed over the hose.



When 90° adapters were used, this assembly became neater-looking and easier to inspect and maintain. It uses less hose, too!

Hose Maintenance

Maintenance

Hose assemblies in operation should be inspected frequently for leakage, kinking, abrasion, corrosion or any other signs of wear or damage. Worn or damaged hose assemblies should be replaced immediately.

Cleaning

Clean assembly by blowing out with clean compressed air. Assemblies may be rinsed out with mineral spirits if the tube stock is compatible with oil; otherwise, hot water at +150°F maximum may be used. Consult Eaton for special cleaning equipment.

Inspection

Examine hose assembly internally for cut or bulged tube, obstructions and cleanliness. For segment style fittings, be sure the hose butts up against the nipple shoulder, band and retaining ring are properly set and tight, and segments are properly spaced. Check

for proper gap between nut and socket or hex and socket. Nuts should swivel freely. Check the layline of the hose to be sure the assembly is not twisted. Cap the ends of the hose with plastic covers to keep them clean.

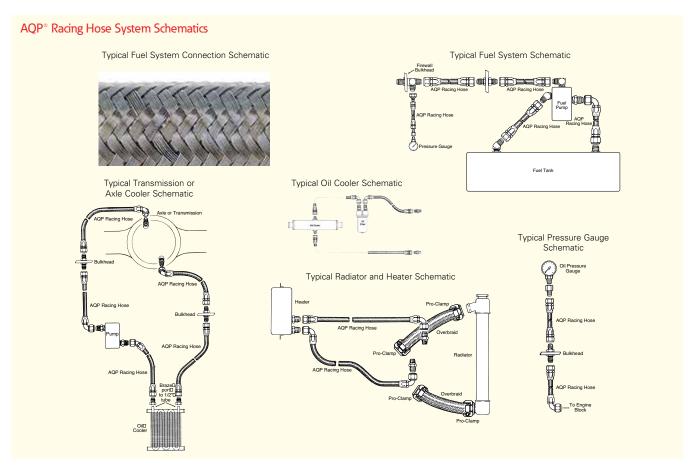
Hydrostatic Proof Testing
The hose assembly should
be hydrostatically tested
at twice the recommended
working pressure of the
hose. Test pressure should
be held for not more than

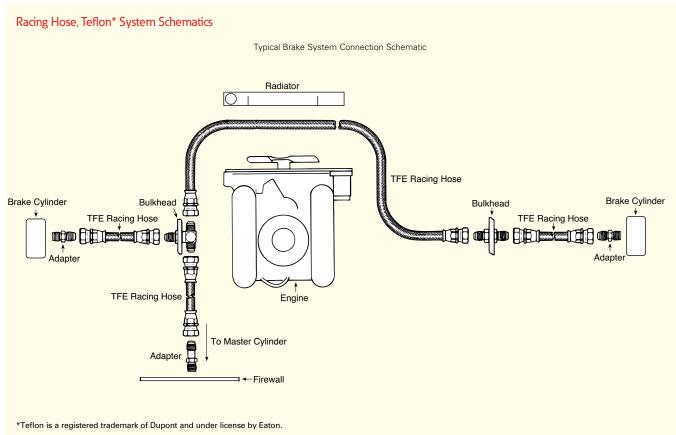
one minute and not less than 30 seconds. When test pressure is reached, visually inspect hose assembly for any leaks or signs of weakness and any movement of the hose fitting in relation to the hose. Any of these defects are cause for rejection.

Caution

Testing should be conducted in approved test stands with adequate guards to protect the operator.







Flow Capacities of Hose Assemblies at Suggested Flow Velocities

This chart is provided as an aid for determining correct hose sizes.

Example

At 13 U.S. gallons per minute, what is the proper hose size within the suggested velocity range for pressure lines?

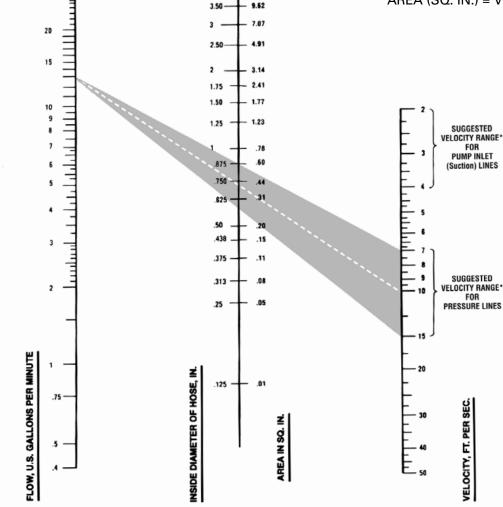
Solution

Locate 13 U.S. gallons per minute in the left-hand column and 10 feet per second in the right-hand column (the center of the suggested velocity range for pressure lines). Lay a straightedge across the two points. The inside diameter is shown in the center column nearest the straightedge.

For suction hose, follow the same procedure except use suggested velocity range for pump inlet lines in the right-hand column.

Based on Formula

G.P.M. \times 0.3208 AREA (SQ. IN.) = VELOCITY (FT./SEC.)



12.57

Conversion Factors

- To convert U.S. gallons into Imperial gallons, multiply U.S. gallons by 0.83267.
- To convert Imperial gallons into U.S. gallons, multiply Imperial gallons by 1.20105.
- To convert U.S. gallons into liters, multiply U.S. gallons by 3.785.
- To convert liters into U.S. gallons, multiply liters by 0.2642.

^{*}Suggestions are for oils having a maximum viscosity of 315 S.S.U. at +100°F (+38°C) and operating at temperatures between +65°F and +155°F (+54°C to +69°C). Under certain conditions, velocities in pressure lines can be increased up to 25 feet per second. Contact Eaton with specific information on your application.

Service Life Factors

Hose assemblies, like other products, have a finite service life. The actual service life of a given hose assembly in a given application is dependent on many variable factors, including the following:

Operating Pressure

Eaton's Aeroquip Performance Products hose assemblies are rated for continuous operation at the maximum operating pressure specified for the hose. Generally, the operating pressure is one fourth the hose minimum burst pressure.

Pressure Surges

Almost all hydraulic systems develop pressure surges which may exceed relief valve settings. Exposing the hose to surge pressure above the maximum operating pressure will shorten hose life and must be considered. A surge (rapid and transient rise in pressure) will not be indicated on many common pressure gauges but can be measured using electronic measuring devices. In systems where surges are severe, select a hose with a higher maximum operating pressure.

Burst Pressure

These are test values only and apply to hose assemblies that have not been used and have been assembled for less than 30 days.

High Pressure

High pressure gaseous systems especially over 250 psi are very hazardous and should be adequately protected from external shock and mechanical or chemical damage. They should also be suitably protected to prevent whiplash action in the event of failure.

Operating Temperatures

Operating temperatures specified refer to the maximum temperature of the fluid or gas being conveyed. High heat conditions may have an adverse effect on hoses due to degradation of the rubber which will limit hose usefulness and reduce fitting retention. In some cases, the fluid being conveyed will slow down this degradation, whereas other fluids may accelerate it Therefore, the maximum temperature of each hose

does not apply to all fluids or gases. Continuous use at maximum temperatures together with maximum pressures should always be avoided. Continuous use at or near the maximum temperature rating will cause a deterioration of physical properties of the tube and cover of most hose. This deterioration will reduce the service life of the hose.

Ambient Temperatures

Very high or low ambient (outside of hose) temperatures will affect cover and reinforcement materials, thus reducing the life of the hose.

Ambient temperatures in conjunction with internal temperatures are also an important factor. For specific recommendations, please consult Eaton.

Bend Radius

Recommended minimum bend radii are based on maximum operating pressures with no flexing of the hose. Safe operating pressure decreases when bend radius is reduced below the recommended minimum. Flexing the hose to less than the specified minimum bend radius will reduce hose life.

Chemical Resistance

Consider the chemical resistance of the fitting, O-ring, hose cover and tube stock. Covers are resistant to mildew, cleaning solvents, oils and fuels.

Vacuum Service

Maximum negative pressures shown for hose -16 and larger are suitable only for hose that has suffered no external damage or kinking. If greater negative pressures are required for -16 and larger hose, the use of an internal support coil is recommended.

IMPORTANT

Hose Assembly Inspection

Hose assemblies in service should be inspected frequently for leakage, kinking, corrosion, abrasion or any other signs of wear or damage. Hose assemblies that are worn or damaged should be removed from service and replaced immediately.

A Caution about Fuel Injection

All hose listed in this catalog is suitable for use with leaded and unleaded fuels. However, caution must be used in fuel injection systems that recirculate fuel. This causes fuel to oxidize which can attack the hose inner tube. To increase service life, keep the time of exposure to the oxidized fuel to a minimum. Drain hose line or flush with original fuel or other suitable material.

Traditional Performance Products

FF13333

The 2"x4" Plan-O-Gram comes complete with all of the inventory, signage and support material needed to get you on the fast track of selling the hose and fitting line that has been the professionals' choice for over 60 years.

INVENTORY

Part Number	Description	Ωty.
FCM1012	-6 Strt Reus Fitting	2
FCM4022	-6 45° Reus Fitting	2
FCM4032	-6 90° Reus Fitting	2
FCM4042	-6 120° Reus Fitting	2
FCM2002	Strt -4 AN to 1/4 Pipe	2
FCM2006	Strt -6 AN to -3/8 Pipe	2
FCM2022	45° -6 AN to -1/4 Pipe	2
FCM2035	90° -6 AN to -3/8 Pipe	2
FCM2114	Carb -6 AN to 7/8-20	2
FCM2111	Fuel -6 to 1/2-20 Inv. Flare	2
FCM2052	Flare Union -6 AN/-6 AN	2
FCM3749	Allen Plug 1/2" Pipe	2

Part Number	Description	Qty
FCM1013	-8 Strt Reus Fitting	2
FCM4023	-8 45° Strt Reus Fitting	2
FCM4033	-8 90° Strt Reus Fitting	2
FCM2007	Strt -8 AN to -3/8 Pipe	2
FCM4037	-8 AN to -3/8 Pipe	2
FCM2110	Carb -8 AN to 7/8-20	2
FCM1014	-10 Strt Reus Fitting	2
FCM4024	-10 45° Reus Fitting	2
FCM4034	-10 90° Reus Fitting	2
FCM2010	Strt -10 AN to 1/2 Pipe	2
FCM2039	90° -10 AN to -1/2 Pipe	2
FCM1015	-12 Strt Reus Fitting	2

Part Number	Description	Qty
FCM4025	-12 45° Reus Fitting	2
FCM4035	-12 90° Reus Fitting	2
FCM2010	FStrt -12 AN to -1/2 Pipe	2
FCM2017	F90° -12 AN to -1/2 Pipe	2
FCM3671	Allen Plug 1/2" Pipe	2
FCM3675	Tube Nut -6	2
FCM3676	Tube Sleeve -6	2
FCM3672	Tube Sleeve -8	2
FCA0606	-6 AQP Racing Hose (6")	2
FCA0803	-8 AQP Racing Hose (3")	2
FCA0806	-8 AQP Racing Hose (6")	2
FF13365	Merchandiser	1

Nickel-Plated Products

FF14619

The 2"x2" Nickel-Plated Fitting and SOCKETLESS™ Hose Plan-O-Gram comes complete with all of the inventory, signage and support material needed to get you on the fast track of selling the hose and fitting line that has been the professionals' choice for over 60 years.

INVENTORY

Part		
Number	Description	Qty.
FCE1512	-6 Strt Sktls Fitting	2
FCE1513	-8 Strt Sktls Fitting	2
FCE1514	-10 Strt Sktls Fitting	2
FCE1522	-6 45° Sktls Fitting	2
FCE1523	-8 45° Sktls Fitting	2
FCE1524	-10 45° Sktls Fitting	2
FCE1532	-6 90° Sktls Fitting	2

Part Number	Description	٥4.
Number	Description	Qty.
FCE1533	-8 90° Stkls Fitting	2
FCE1534	-10 90° Sktls Fittin	2
FCE2005	-6 AN to Pipe Adapter	2
FCE2007	-8 AN to Piper Adapter	2
FCE2010	-10 AN to Pipe Adapter	2
FCE2022	-6 45° Adapter	2
FCE2023	-8 45° Adapter	2

Part Number	Description	Qty.
FCE2035	-6 90° Adapter	2
FCE2037	-8 90° Adapter	2
FCE2039	-10 90° Adapter	2
FCN0615	-6 Sktls Hose	15"
FCN0815	-8 Sktls Hose	15"
FCN1015	-10 Sktls Hose	15"
FF13365	Merchandiser	1

A/C Hose Products

FF13565

The 2"x2" A/C Fitting and Hose Plan-O-Gram comes complete with all of the inventory, signage and support material needed to get you on the fast track of selling the hose and fitting line that has been the professionals' choice for over 60 years.

INVENTORY

Part		
Number	Description	Qty.
FCE1712	-6 Strt Reus Fitting	2
FCE1713	-8 Strt Reus Fitting	2
FCE1714	-10 Strt Reus Fitting	2
FCE1722	-6 45° Strt Reus Fitting	2
FCE1723	-8 45° Strt Reus Fitting	2

art Iumber	Description	Qty.
CE1724	-10 45° Reus Fitting	2
CE1732	-6 90° Reus Fitting	2
CE1733	-8 90° Reus Fitting	2
CE1734	-10 90° Reus Fitting	2
CM3416	-6 Refrigerant O-rings	2

Part Number	Description	Ωty.
FCM3417	-8 Refrigerant O-rings	2
FCM3418	-10 Refrigerant O-rings	2
FCF0603	-6 A/C Hose (3")	2
FCF0803	-8 A/C Hose (3")	2
FCF1003	-10 A/C Hose (3")	2

Stand-Alone Merchandising Kit (Make Your Own)

FF13365

- "Aeroquip Performance Products Sold Here" cling-on window decal
- · Header card for Plan-O-Gram
- Aeroquip Performance Products 2"x5" banner
- 35 Reorder tags







Part Number	Page	Part Number	Page	Part Number	Page	Part Number	Page
ET1000AE	43	FBM1127	16	FBM1441	12	FBM4222	8
ET1010AE	43	FBM1128	16	FBM1442	12	FBM4223	8
FBA0400	6	FBM1129	16	FBM1443	12	FBM4224	8
FBA0600	6	FBM1153	36	FBM1444	12	FBM4225	8
FBA0800	6	FBM1200	12	FBM1445	12	FBM4226	8
FBA1000	6	FBM1201	12	FBM3011	36	FBM4232	9
FBA1200	6	FBM1202	12	FBM3012	36	FBM4233	9
FBA1600	6	FBM1203	12	FBM3013	36	FBM4234	9
FBA2000	6	FBM1204	12	FBM3015	36	FBM4235	9
FBA2400	6	FBM1205	12	FBM3016	36	FBM4236	9
FBA3200	6	FBM1206	12	FBM3113	36	FBM4242	9
FBC0300	15	FBM1207	12	FBM3114	36	FBM4243	9
FBC0400	15	FBM1211	12	FBM3412	38	FBM4244	9
FBC0600	15	FBM1212	12	FBM3413	38	FBM4245	9
FBC0800	15	FBM1213	12	FBM3414	38	FBM4246	9
FBF0600	13	FBM1214	12	FBM3553AE	41	FBM4252	10
FBF0800	13	FBM1222	12	FBM3632AE	41	FBM4253	10
FBF1000	13	FBM1225	12	FBM3646AE	41	FBM4254	10
FBG0600	18	FBM1231	12	FBM3647	37	FBM4255	10
FBG0800	18	FBM1232	12	FBM3648	37	FBM4256	10
FBG1000	18	FBM1233	12	FBM3649	37	FBM4263	10
FBG1200	18	FBM1234	12	FBM3650	37	FBM4264	10
FBL1512	11	FBM1302	18	FBM3651	37	FBM4265	10
FBL1513	11	FBM1305	18	FBM3652	37	FBM4266	10
FBL1514	11	FBM1307	18	FBM3653	37	FBM4272	7
FBL1515	11	FBM1310	18	FBM3654	37	FBM4273	7
FBL1522	12	FBM1338	18	FBM3655	37	FBM4274	7
FBL1523	12	FBM1339	18	FBM3656	37	FBM4275	7
FBL1524	12	FBM1348	8	FBM3657	37	FBM4282	8
FBL1525	12	FBM1349	8	FBM3658	37	FBM4283	8
FBL1532	12	FBM1350	8	FBM3659	37	FBM4284	8
FBL1533	12	FBM1351	8	FBM3660	37	FBM4285	8
FBL1534	12	FBM1352	8	FBM4121	8	FBN0600	11
FBL1535	12	FBM1353	8	FBM4124	8	FBN0800	11
FBL1542	12	FBM1355	9	FBM4125	8	FBN1000	11
FBL1543	12	FBM1356	9	FBM4127	8	FBN1200	11
FBL1544	12	FBM1357	9	FBM4131	9	FBPA0300HA	17
FBL1545	12	FBM1358	9	FBM4134	9	FBPA0345HA	17
FBL1552	12	FBM1359	9	FBM4135	9	FBPA0390HA	17
FBL1553	12	FBM1360	9	FBM4137	9	FBPA0400HA	17
FBL1554	12	FBM1363	18	FBM4141	9	FBPA0445HA	17
FBL1555	12	FBM1365	18	FBM4144	9	FBPA0490HA	17
FBL1562	12	FBM1374	18	FBM4145	9	FBPC0300HA	17
FBL1563	12	FBM1376	18	FBM4151	10	FBPC0400HA	17
FBL1564	12	FBM1382	18	FBM4174	7	FBR1200	38
FBL1565	12	FBM1383	18	FBM4175	7	FBR2400	38
FBM1073	35	FBM1384	18	FBM4184	8	FBS0700	37
FBM1074	35	FBM1386	18	FBM4185	8	FBS0800	37
FBM1115	35	FBM1387	18	FBM4211	7	FBS0900	37
FBM1116	35	FBM1389	18	FBM4212	7	FBS1000	37
FBM1117	35	FBM1392	18	FBM4213	7	FBS1100	37
FBM1118	35 16	FBM1394	18	FBM4214	7	FBS1200	37
FBM1124	16	FBM1438	12	FBM4215	7	FBS1300	37
FBM1125	16	FBM1439	12	FBM4216	7	FBS1400	37
FBM1126	16	FBM1440	12	FBM4217	7	FBS1600	37



Part Number	Page	Part Number	Page	Part Number	Page	Part Number	Page
FBS1800	37	FCA2015	6	FCE1812	14	FCE2060	28
FBS2000	37	FCA2020	6	FCE1813	14	FCE2061	28
FBS2200	37	FCA2402	6	FCE1814	14	FCE2063	28
FBS2400	37	FCA2403	6	FCE1832	14	FCE2064	28
FBU0400	6	FCA2406	6	FCE1833	14	FCE2071	26
FBU0600	6	FCA3202	6	FCE1834	14	FCE2072	26
FBU0800	6	FCA3203	6	FCE1893	14	FCE2073	26
FBU1000	6	FCA3206	6	FCE1894	14	FCE2074	26
FBU1200	6	FCC0303	15	FCE1912	14	FCE2075	26
FBU1600	6	FCC0306	15	FCE1913	14	FCE2076	26
FBU2000	6	FCC0310	15	FCE1914	14	FCE2077	26
FBV0400	11	FCC0315	15	FCE2000	19	FCE2081	26
FBV0600	11	FCC0320	15	FCE2001	19	FCE2082	26
FBV0800	11	FCC0403	15	FCE2002	19	FCE2083	26
FBV1000	11, 35	FCC0406	15	FCE2003	19	FCE2084	26
FBV1200	11	FCC0410	15	FCE2004	19	FCE2099	27
FCA0403	6	FCC0415	15	FCE2005	19	FCE2100	27
FCA0406	6	FCC0420	15	FCE2006	19	FCE2103	27
FCA0410	6	FCC0603	15	FCE2007	19	FCE2104	27
FCA0415	6	FCC0606	15	FCE2008	19	FCE2105	27
FCA0420	6	FCC0610	15	FCE2009	19	FCE2106	27
FCA0450	6	FCC0615	15	FCE2010	19	FCE2107	33
FCA0603	6	FCC0620	15	FCE2011	19	FCE2110	33
FCA0606	6	FCC0803	15	FCE2012	19	FCE2112	33
FCA0610	6	FCC0806	15	FCE2013	19	FCE2113	33
FCA0615	6	FCC0810	15	FCE2014	18	FCE2114	33
FCA0620	6	FCC0815	15	FCE2015	19	FCE2116	33
FCA0650	6	FCC0820	15	FCE2016	20	FCE2120	22
FCA0803	6	FCE1012	7	FCE2017	20	FCE2121	28
FCA0806	6	FCE1013	7	FCE2020	20	FCE2122	28
FCA0810	6	FCE1014	7	FCE2021	20	FCE2129	23
FCA0815	6	FCE1015	7	FCE2022	20	FCE2130	23
FCA0820	6	FCE1512	12	FCE2023	20	FCE2132	23
FCA0850	6	FCE1513	12	FCE2024	20	FCE2133	23
FCA1003	6	FCE1514	12	FCE2025	20	FCE2134	23
FCA1006	6	FCE1515	12	FCE2030	20	FCE2135	23
FCA1010	6	FCE1522	12	FCE2031	20	FCE2136	23
FCA1015	6	FCE1523	12	FCE2032	20	FCE2137	23
FCA1020	6	FCE1524	12	FCE2033	20	FCE2138	23
FCA1050	6	FCE1525	12	FCE2034	20	FCE2139	23
FCA1203	6	FCE1532	12	FCE2035	20	FCE2140	23
FCA1206	6	FCE1533	12	FCE2036	20	FCE2141	23
FCA1210	6	FCE1534	12	FCE2037	20	FCE2142	23
FCA1215	6	FCE1535	12	FCE2038	20	FCE2147	23
FCA1220	6	FCE1712	14	FCE2039	20	FCE2150	29
FCA1250	6	FCE1713	14	FCE2040	20	FCE2158	21
FCA1603	6	FCE1714	14	FCE2048	21	FCE2160	21
FCA1606	6	FCE1722	14	FCE2049	21	FCE2162	21
FCA1610	6	FCE1723	14	FCE2050	21	FCE2163	21
FCA1615	6	FCE1724	14	FCE2051	21	FCE2166	21
FCA1620	6	FCE1732	14	FCE2052	21	FCE2167	21
FCA1650	6	FCE1733	14	FCE2053	21	FCE2170	21
FCA2003	6	FCE1734	14	FCE2054	21	FCE2179	32
FCA2006	6	FCE1793	14	FCE2055	21	FCE2183	32
FCA2010	6	FCE1794	14	FCE2056	21	FCE2184	32



Part Number	Page	Part Number	Page	Part Number	Page	Part Number	Page
FCE2185	19, 31	FCL1515	11	FCM1044	9	FCM1151	16
FCE2186	22	FCL1522	12	FCM1045	9	FCM1155	16
FCE2187	18	FCL1523	12	FCM1046	9	FCM1343	9
FCE2190	22	FCL1524	12	FCM1047	9	FCM1344	9
FCE2192	33	FCL1525	12	FCM1052	10	FCM1345	9
FCE2240	25	FCL1532	12	FCM1053	10	FCM1512	12
FCE2243	25	FCL1533	12	FCM1054	10	FCM1513	12
FCE2246	25	FCL1534	12	FCM1055	10	FCM1514	12
FCE2247	33	FCL1535	12	FCM1056	10	FCM1515	12
FCE2248	33	FCL1542	12	FCM1062	10	FCM1522	12
FCE2263	25	FCL1543	12	FCM1063	10	FCM1523	12
FCE2769	26	FCL1544	12	FCM1064	10	FCM1524	12
FCE2799	26	FCL1545	12	FCM1065	10	FCM1525	12
FCE2815	27	FCL1552	12	FCM1066	31	FCM1532	12
FCE2953	25	FCL1553	12	FCM1067	31	FCM1533	12
FCE2954	25	FCL1554	12	FCM1068	31	FCM1534	12
FCE2955	25	FCL1555	12	FCM1069	31	FCM1535	12
FCE2956	25	FCL1562	12	FCM1070	32	FCM1542	12
FCE3556	27	FCL1563	12	FCM1075	7	FCM1543	12
FCE4022	8	FCL1564	12	FCM1076	7	FCM1544	12
FCE4023	8	FCL1565	12	FCM1079	8	FCM1545	12
FCE4024	8	FCM1001	38	FCM1080	8	FCM1552	12
FCE4025	8	FCM1002	38	FCM1083	9	FCM1553	12
FCE4032	9	FCM1003	38	FCM1084	9	FCM1554	12
FCE4033	9	FCM1004	38	FCM1100	16	FCM1555	12
FCE4034	9	FCM1005	38	FCM1101	16	FCM1562	12
FCE4035	9	FCM1006	38	FCM1102	16	FCM1563	12
FCF0603	13	FCM1007	38	FCM1103	16	FCM1564	12
FCF0606	13	FCM1008	38	FCM1104	16	FCM1565	12
FCF0609	13	FCM1009	38	FCM1110	16	FCM2000	19
FCF0803	13	FCM1010	38	FCM1111	16	FCM2001	19
FCF0806	13	FCM1011	7	FCM1112	16	FCM2002	19
FCF0809	13	FCM1012	7	FCM1113	16	FCM2003	19
FCF1003	13	FCM1013	7	FCM1114	16	FCM2004	19
FCF1006	13	FCM1014	7	FCM1120	16	FCM2005	19
FCF1009	13	FCM1015	7	FCM1121	16	FCM2006	19
FCG0606	18	FCM1016	7	FCM1122	16	FCM2007	19
FCG0610	18	FCM1017	7	FCM1123	16	FCM2008	19
FCG0615	18	FCM1021	8	FCM1130	16	FCM2009	19
FCG0620	18	FCM1022	8	FCM1134	16	FCM2010	19
FCG0806	18	FCM1023	8	FCM1135	16	FCM2011	19
FCG0810	18	FCM1024	8	FCM1136	16	FCM2012	19
FCG0815	18	FCM1025	8	FCM1137	16	FCM2013	19
FCG0820	18	FCM1026	8	FCM1138	16	FCM2014	19
FCG1006	18	FCM1027	8	FCM1139	16	FCM2015	18
FCG1010	18	FCM1028	10	FCM1140	16	FCM2016	20
FCG1015	18	FCM1031	9	FCM1141	16	FCM2017	20
FCG1020	18	FCM1032	9	FCM1142	16	FCM2018	20
FCG1206	18	FCM1033	9	FCM1143	16	FCM2020	20
FCG1210	18	FCM1034	9	FCM1144	16	FCM2021	20
FCG1215	18	FCM1035	9	FCM1145	16	FCM2022	20
FCG1220	18	FCM1036	9	FCM1146	16	FCM2023	20
FCL1512	11	FCM1037	9	FCM1147	7	FCM2024	20
FCL1513	11	FCM1042	9	FCM1148	8	FCM2025	20
FCL1514	11	FCM1043	9	FCM1150	16	FCM2026	20



Part Number	Page	Part Number	Page	Part Number	Page	Part Number	Page
FCM2030	20	FCM2108	31	FCM2176	29	FCM2298	28
FCM2031	20	FCM2110	33	FCM2177	29	FCM2299	28
FCM2032	20	FCM2111	31	FCM2178	32	FCM2371	19
FCM2033	20	FCM2112	33	FCM2179	32	FCM2372	19
FCM2034	20	FCM2113	33	FCM2180	27	FCM2374	19
FCM2035	20	FCM2114	33	FCM2181	31	FCM2403	26
FCM2036	20	FCM2116	33	FCM2182	31	FCM2404	26
FCM2037	20	FCM2117	27	FCM2183	32	FCM2405	26
FCM2038	20	FCM2118	27	FCM2184	32	FCM2406	26
FCM2039	20	FCM2119	22	FCM2185	19, 31	FCM2407	26
FCM2040	20	FCM2120	22	FCM2186	22	FCM2408	21
FCM2041	20	FCM2121	28	FCM2187	28	FCM2409	21
FCM2048	21	FCM2122	28	FCM2188	21	FCM2410	21
FCM2049	21	FCM2123	28	FCM2189	21	FCM2411	21
FCM2050	21	FCM2124	28	FCM2190	22	FCM2413	21
FCM2051	21	FCM2125	28	FCM2191	22	FCM2414	21
FCM2052	21	FCM2126	28	FCM2192	33	FCM2416	21
FCM2053	21	FCM2127	26	FCM2193	33	FCM2421	21
FCM2054	21	FCM2128	26	FCM2239	25	FCM2422	21
FCM2055	21	FCM2129	23	FCM2240	25	FCM2425	26
FCM2056	21	FCM2130	23	FCM2241	25	FCM2426	26
FCM2060	28	FCM2131	23	FCM2242	25	FCM2430	14
FCM2061	28	FCM2132	23	FCM2243	25	FCM2431	14
FCM2062	28	FCM2133	23	FCM2244	25	FCM2432	14
FCM2063	28	FCM2134	23	FCM2245	25	FCM2440	20
FCM2064	28	FCM2135	23	FCM2246	25	FCM2441	20
FCM2065	28	FCM2136	23	FCM2247	33	FCM2442	20
FCM2066	28	FCM2137	23	FCM2248	33	FCM2443	20
FCM2071	26	FCM2138	23	FCM2249	33	FCM2444	20
FCM2072	26	FCM2139	23	FCM2251	28	FCM2445	20
FCM2073	26	FCM2140	23	FCM2252	28	FCM2446	20
FCM2074	26	FCM2141	23	FCM2254	29	FCM2447	20
FCM2075	26	FCM2142	23	FCM2255	29	FCM2448	20
FCM2076	26	FCM2143	23	FCM2256	29	FCM2449	20
FCM2077	26	FCM2144	23	FCM2257	29	FCM2450	20
FCM2081	26	FCM2145	23	FCM2258	29	FCM2451	20
FCM2082	26	FCM2146	23	FCM2259	29	FCM2491	23
FCM2083	26	FCM2147	23	FCM2263	25	FCM2492	23
FCM2084	26	FCM2148	23	FCM2272	22	FCM2493	23
FCM2085	26	FCM2149	23	FCM2273	22	FCM2494	23
FCM2086	26	FCM2150	29	FCM2274	22	FCM2495	23
FCM2091	27	FCM2151	29	FCM2276	19	FCM2496	23
FCM2092	27	FCM2152	29	FCM2277	19	FCM2497	23
FCM2093	27	FCM2156	21	FCM2278	19	FCM2498	23
FCM2095	27	FCM2160	21	FCM2279	19	FCM2499	23
FCM2096	27	FCM2162	21	FCM2281	29	FCM2500	23
FCM2097	27	FCM2163	21	FCM2282	29	FCM2511	19
FCM2098	27	FCM2165	21	FCM2283	29	FCM2512	19
FCM2099	27	FCM2166	21	FCM2284	29	FCM2513	19
FCM2100	27	FCM2167	21	FCM2285	29	FCM2514	19
FCM2103	27	FCM2169	21	FCM2286	29	FCM2515	19
FCM2104	27	FCM2170	21	FCM2290	20	FCM2516	19
FCM2105	27	FCM2173	29	FCM2291	20	FCM2517	19
FCM2106	27	FCM2174	29	FCM2292	20	FCM2518	19
FCM2107	33	FCM2175	29	FCM2293	20	FCM2519	19

Bulk or Retail Packaged Parts
FB-prefixed part numbers indicate bulk-packaged products. FC-prefixed part numbers indicate carded/clam shelled (retail-packaged) products.
Most products in this catalog can be ordered in either package style by changing the prefix accordingly.



Part Number	Page	Part Number	Page	Part Number	Page	Part Number	Page
FCM2520	19	FCM2612	20	FCM2732	20	FCM2802	27
FCM2521	19	FCM2613	20	FCM2733	20	FCM2803	27
FCM2522	19	FCM2614	20	FCM2734	20	FCM2804	27
FCM2523	19	FCM2615	20	FCM2735	20	FCM2805	27
FCM2524	19	FCM2616	20	FCM2736	20	FCM2806	27
FCM2525	19	FCM2617	20	FCM2737	20	FCM2807	27
FCM2526	19	FCM2618	20	FCM2749	21	FCM2808	27
FCM2527	19	FCM2619	20	FCM2750	21	FCM2809	27
FCM2528	19	FCM2620	20	FCM2751	21	FCM2811	27
FCM2529	19	FCM2621	20	FCM2752	21	FCM2812	27
FCM2530	19	FCM2622	20	FCM2753	21	FCM2813	27
FCM2531	19	FCM2623	20	FCM2754	21	FCM2814	27
FCM2532	19	FCM2624	20	FCM2755	21	FCM2815	27
FCM2533	19	FCM2625	20	FCM2756	21	FCM2816	27
FCM2534	19	FCM2626	20	FCM2757	21	FCM2817	28
FCM2535	19	FCM2627	20	FCM2758	21	FCM2818	28
FCM2536	19	FCM2628	20	FCM2759	21	FCM2819	28
FCM2537	19	FCM2629	20	FCM2760	21	FCM2821	27
FCM2538	19	FCM2630	20	FCM2761	21	FCM2822	27
FCM2539	19	FCM2631	20	FCM2762	21	FCM2823	27
FCM2540	19	FCM2632	20	FCM2763	21	FCM2824	27
FCM2541	19	FCM2633	20	FCM2764	21	FCM2825	27
FCM2542	19	FCM2634	20	FCM2765	21	FCM2831	27
FCM2543	19	FCM2635	20	FCM2766	21	FCM2832	27
FCM2544	19	FCM2636	20	FCM2769	26	FCM2833	27
FCM2545	19	FCM2637	20	FCM2770	26	FCM2834	27
FCM2546	19	FCM2638	20	FCM2771	26	FCM2835	27
FCM2547	19	FCM2639	20	FCM2772	26	FCM2871	26
FCM2581	20	FCM2700	28	FCM2773	26	FCM2872	26
FCM2582	20	FCM2701	28	FCM2774	26	FCM2873	26
FCM2583	20	FCM2702	28	FCM2775	26	FCM2874	26
FCM2584	20	FCM2703	28	FCM2776	26	FCM2875	26
FCM2585	20	FCM2704	28	FCM2777	26	FCM2876	26
FCM2586	20	FCM2705	28	FCM2778	26	FCM2877	26
FCM2587	20	FCM2706	28	FCM2779	26	FCM2878	26
FCM2588	20	FCM2707	28	FCM2781	26	FCM2879	26
FCM2589	20	FCM2708	28	FCM2782	26	FCM2880	26
FCM2590	20	FCM2709	28	FCM2783	26	FCM2881	28
FCM2591	20	FCM2710	28	FCM2784	26	FCM2882	28
FCM2592	20	FCM2711	28	FCM2785	26	FCM2883	28
FCM2593	20	FCM2712	28	FCM2786	26	FCM2884	28
FCM2594	20	FCM2714	28	FCM2787	27	FCM2885	28
FCM2595	20	FCM2719	20	FCM2788	26	FCM2893	26
FCM2596	20	FCM2720	20	FCM2790	26	FCM2899	27
FCM2597	20	FCM2721	20	FCM2791	26	FCM2909	29
FCM2598	20	FCM2722	20	FCM2792	26	FCM2910	29
FCM2599	20	FCM2723	20	FCM2793	26	FCM2914	22
FCM2600	20	FCM2724	20	FCM2794	26	FCM2915	22
FCM2601	20	FCM2725	20	FCM2795	26	FCM2916	22
FCM2602	20	FCM2726	20	FCM2796	26	FCM2917	22
FCM2603	20	FCM2727	20	FCM2797	26	FCM2918	22
FCM2608	18, 25	FCM2728	20	FCM2798	26	FCM2919	22
	18, 25	FCM2729	20	FCM2799	26	FCM2921	30
FCM2609	.0, _0						
FCM2610	20	FCM2730	20	FCM2800	27	FCM2922	30



Part Number	Page	Part Number	Page	Part Number	Page	Part Number	Page
FCM2925	29	FCM2997	25	FCM3466	37	FCM3601	24
FCM2926	29	FCM2998	25	FCM3467	37	FCM3602	24
FCM2927	29	FCM2999	25	FCM3468	37	FCM3603	24
FCM2928	29	FCM3001	25	FCM3469	37	FCM3604	24
FCM2929	29	FCM3002	25	FCM3470	37	FCM3605	24
FCM2930	29	FCM3003	25	FCM3472	37	FCM3627	37
FCM2931	29	FCM3081	36	FCM3473	37	FCM3642	37
FCM2932	29	FCM3082	36	FCM3474	37	FCM3644AE	40
FCM2933	29	FCM3083	36	FCM3475	37	FCM3661AE	41
FCM2934	29	FCM3084	36	FCM3476	37	FCM3662AE	40
FCM2935	29	FCM3085	36	FCM3477	37	FCM3663AE	40
FCM2936	29	FCM3086	36	FCM3479	24	FCM3664AE	40
FCM2937	29	FCM3087	36	FCM3480	24	FCM3667	24
FCM2938	30	FCM3088	16	FCM3481	37	FCM3668	24
FCM2939	30	FCM3089	16	FCM3482	37	FCM3669	24
FCM2940	30	FCM3091	16	FCM3483	37	FCM3670	24
FCM2941	30	FCM3092	16	FCM3484	37	FCM3671	24
FCM2942	30	FCM3117	35	FCM3485	37	FCM3672	24
FCM2943	30	FCM3118	35	FCM3486	37	FCM3673	24
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FCM2950	29	FCM3125	35	FCM3513	37	FCM3680	24
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FCM2964	18, 25	FCM3136	35	FCM3555	24	FCM3701	24
FCM2965	18, 25	FCM3137	35	FCM3556	27	FCM3702	24
FCM2966	30	FCM3148	22	FCM3566	24	FCM3703	24
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FCM2971	22	FCM3151	22	FCM3571	24	FCM3706	24
FCM2972	22	FCM3155	22	FCM3572	24	FCM3707	24
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FCM2975	22	FCM3158	22	FCM3575	24	FCM3713	24
FCM2978	22	FCM3362AE	40	FCM3576	24	FCM3714	24
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FCM2982	22	FCM3417	14	FCM3585	27 27	FCM3717	24
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FCM2993	25	FCM3463	37	FCM3587	27	FCM3720	16
FCM2995	25	FCM3464	37	FCM3588	27	FCM3721	16
FCM2996	25	FCM3465	37	FCM3591	24	FCM3722	24



Part Number	Page						
FCM3723	24	FCM4082	8	FCM5010	19	FCM5100	27
FCM3724	24	FCM4083	8	FCM5011	19	FCM5103	27
FCM3725	24	FCM4084	8	FCM5012	19	FCM5104	27
FCM3726	24	FCM4085	8	FCM5014	19	FCM5105	27
FCM3727	24	FCM4086	8	FCM5013	19	FCM5106	27
FCM3740	24	FCM4412	7	FCM5015	19	FCM5119	22
FCM3741	24	FCM4413	7	FCM5016	20	FCM5120	22
FCM3742	24	FCM4414	7	FCM5017	20	FCM5121	28
FCM3743	24	FCM4415	7	FCM5020	20	FCM5122	28
FCM3744	24	FCM4416	7	FCM5021	20	FCM5123	28
FCM3749	24	FCM4422	8	FCM5022	20	FCM5124	28
FCM3750	24	FCM4423	8	FCM5023	20	FCM5125	28
FCM3751	24	FCM4424	8	FCM5024	20	FCM5126	28
FCM3752	24	FCM4425	8	FCM5025	20	FCM5129	23
		FCM4426		FCM5030			
FCM3821	16		8		20	FCM5130	23
FCM3822	16	FCM4432	9	FCM5031	20	FCM5131	23
FCM3823	16	FCM4433	9	FCM5032	20	FCM5132	23
FCM3824	16	FCM4434	9	FCM5033	20	FCM5133	23
FCM3827	24	FCM4435	9	FCM5034	20	FCM5134	23
FCM3828	24	FCM4436	9	FCM5035	20	FCM5135	23
FCM3829	24	FCM4442	9	FCM5060	28	FCM5136	23
FCM3830	24	FCM4443	9	FCM5061	28	FCM5137	23
FCM3831	24	FCM4444	9	FCM5062	28	FCM5138	23
FCM3832	24	FCM4445	9	FCM5063	28	FCM5139	23
FCM3833	27	FCM4446	9	FCM5064	28	FCM5140	23
FCM4022	8	FCM4452	10	FCM5065	28	FCM5141	23
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FCM4024	8	FCM4454	10	FCM5100	27	FCM5147	23
FCM4025	8	FCM4455	10	FCM5103	27	FCM5148	23
FCM4026	8	FCM4456	10	FCM5104	27	FCM5149	23
FCM4032	9	FCM4462	10	FCM5105	27	FCM5150	29
FCM4033	9	FCM4463	10	FCM5306	20	FCM5151	29
FCM4034	9	FCM4464	10	FCM5036	20	FCM5152	29
FCM4035	9	FCM4465	10	FCM5037	20	FCM5156	21
FCM4036	9	FCM4466	10	FCM5038	20	FCM5160	21
FCM4042	9	FCM4472	7	FCM5039	20	FCM5162	21
FCM4043	9	FCM4473	7	FCM5040	20	FCM5163	21
FCM4044	9	FCM4474	7	FCM5048	20		21
						FCM5166	
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FCM4046	9	FCM4476	7	FCM5050	21	FCM5170	21
FCM4052	10	FCM4482	8	FCM5051	21	FCM5179	32
FCM4053	10	FCM4483	8	FCM5052	21	FCM5183	32
FCM4054	10	FCM4484	8	FCM5053	21	FCM5184	32
FCM4055	10	FCM4485	8	FCM5054	21	FCM5185	19
FCM4056	10	FCM4486	8	FCM5055	21	FCM5186	22
FCM4062	10	FCM5000	19	FCM5056	21	FCM5187	28
FCM4063	10	FCM5001	19	FCM5071	26	FCM5190	22
FCM4064	10	FCM5002	19	FCM5072	26	FCM5240	25
FCM4065	10	FCM5003	19	FCM5073	26	FCM5241	25
FCM4066	10	FCM5004	19	FCM5074	26	FCM5243	25
FCM4072	7	FCM5005	19	FCM5075	26	FCM5244	25
FCM4073	7	FCM5006	19	FCM5076	26	FCM5245	25
FCM4074	7	FCM5007	19	FCM5077	26	FCM5246	25
		FCM5008					
FCM4075	7	LCINIO000	19	FCM5091	27	FCM5254	29



Page

Part Number	Page	Part Number	Page	Part Number
FCM5256	29	FCM5832	24	FCU0820
FCM5263	25	FCM5893	26	FCU1006
FCM5554	24	FCM5953	25	FCU1010
FCM5555	24	FCM5954	25	FCU1015
FCM5556	27	FCM5955	25	FCU1020
FCM5567	24	FCM5956	25	FCU1206
FCM5669	24	FCM5992	25	FCU1210
FCM5670	24	FCM5993	25	FCU1215
FCM5671	24	FCM5995	25	FCU1220
FCM5672	24	FCM5996	25	FCU1606
FCM5673	24	FCM5997	25	FCU1610
FCM5674	24	FCM5998	25	FCU1615
FCM5675	24	FCM5999	25	FCU1620
FCM5677	24	FCM6001	25	FCU2006
FCM5678	24	FCM6002	25	FCU2010
FCM5684	24	FCM6003	25	FCU2015
FCM5685	24	FCM6714	24	FCU2020
FCM5686	24	FCN0615	11	FCV0615
FCM5687	24	FCN0620	11	FCV0620
FCM5712	24	FCN0815	11	FCV0815
FCM5713	24	FCN0820	11	FCV0820
FCM5714	28	FCN1015	11	FCV1015
FCM5715	24	FCN1020	11	FCV1020
FCM5716	24	FCN1215	11	FT1258AE
FCM5717	24	FCN1220	11	FT1380-1-1AE
FCM5718	24	FCP0101	34	FT1380-115AE
FCM5719	24	FCP0102	34	FT1380-275-M370AE
FCM5722	24	FCP0107HA	17	T-400AE
FCM5723	24	FCP0108HA	17	
FCM5724	24	FCP0129	34	
FCM5725	24	FCP0134	34	
FCM5726	24	FCP0138	32	
FCM5727	24	FCP0139	32	
FCM5740	24	FCP0140	32	
FCM5741	24	FCR1203	38	
FCM5742	24	FCR1206	38	
FCM5743	24	FCR1210	38	
FCM5744	24	FCR1215	38	
FCM5749	24	FCR1220	38	
FCM5750	24	FCR2403	38	
FCM5751	24	FCR2406	38	
FCM5752	24	FCR2410	38	
FCM5769	26	FCR2415	38	
FCM5799	26	FCR2420	38	
FCM5081	26	FCU0406	6	
FCM5082	26	FCU0410	6	
FCM5083	26	FCU0415	6	
FCM5084	26	FCU0420	6	
FCM5085	26	FCU0606	6	
FCM5815	20 27	FCU0610	6	
FCM5827	24	FCU0615	6	
FCM5828	24	FCU0613 FCU0620	6	
FCM5829	24 24	FCU0806	6	
FCM5830	24	FCU0810	6	
FCM5831	24	FCU0815	6	