



EAT•N

Aeroquip

Performance Products



Aeroquip
PERFORMANCE PRODUCTS

INTRODUCTION

Eaton's Aeroquip Performance Product brand of hose and fittings continues to prove there is a difference in performance plumbing products. Our long tradition of offering exceptionally high quality and innovative engineered parts has made Aeroquip Performance Products the dominant choice of motorsport professionals and enthusiasts throughout the world. In fact, Eaton is the only leading performance plumbing supplier that engineers and manufactures its own hose and fittings to not only fit together, but to perform together as well.

Utilizing the latest in forecasting, MRP tools and a state-of-the-art distribution facility, Eaton has achieved unprecedented fill-rate levels. Eaton's unique advantage of controlling its own manufacturing ensures you receive the right part—at the right time—every time.

With these critical advantages, a pipeline full of new products and unmatched marketing support, Eaton is ready and excited about continuing its six decades of industry leadership well into the next millennium.



There Is a Difference

- Eaton is the only leading performance plumbing supplier that engineers and manufactures its own hose and fittings.
- State-of-the-art testing capabilities and ISO 9001 and QS 9000 quality certified facilities are Eaton hallmarks.
- A 100,000-plus-square-foot Central Distribution Facility sends products out the door—when and where they are needed.
- AQP® patented inner tube is scientifically superior—allowing fluid and ambient temperatures of +300°F with no loss in performance and unmatched fluid compatibility.
- Contingency programs with NHRA and IHRA provide support to a wide range of racers.
- Aeroquip Performance Products hose and fittings are official products of the International Race of Champions (IROC)
- With the largest staff of engineers in the industry, Eaton aggressively supports product quality and new product development.

Aeroquip Performance Products Part Numbers

Products in this catalog have part numbers that consist of three letters followed by four numbers. The second letter indicates that the product is bulk or retail packaged, as follows:

- **FBA0406**—Part numbers with **B** as the second letter indicate the product is bulk packaged.

- **FCA0406**—Part numbers with **C** as the second letter indicate the product is carded/clam shelled (retail packaged).

Most products in this catalog can be ordered in either package style by changing the prefix accordingly.

The four digits in the part number identify the hose dash size (inside diameter) and length, as follows:

- **FCA0406**—The first two digits—**04**—indicate the hose's dash size.
- **FCA0406**—The last two digits—**06**—indicate the length in feet of the packaged hose.

Hose Pattern Length

Bulk Hose

When ordering FBA, FBV, FBF, FBG, FBN and FBU hose in bulk, random length pieces may be used to fill the total ordered quantity, as follows:

- Minimum of 85% will be more than 25 feet.
- Maximum of 15% will be between 5 feet and 24 feet. For example, a 100 foot order would have at minimum 85 feet in length patterns in

excess of 25 feet and a maximum of 15 feet would be in patterns between 5 feet and 24 feet.

- Eaton reserves the right to ship more or less than 10% of the bulk hose quantity ordered.

Reeled Hose

For reeled hose, indicate feet requirements in denominations of the minimum quantity per reel in feet. For example, FBA1200 has a minimum

of 180 feet per reel; therefore, this product should be ordered in 180-foot increments, such as 180 feet, 360 feet, 540 feet, etc. Consult your Eaton Customer Service representative for minimum and maximum lengths per reel for each type and size of hose.

Eaton reserves the right to ship more or less than 10% of the minimum and maximum reeled length hose.

Table of Contents



The Right Hose

This catalog contains important specifications about each Aeroquip Performance Products hose, including maximum operating pressure, operating temperature range, minimum bend radius, vacuum service and weight. See Page 54 for service life factors. Carefully review this information to ensure you select the proper hose for your application.

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Warranty

Eaton warrants its products to be free from defects in material and workmanship for a period of one year from the date of original delivery. Eaton's obligation under this warranty is limited to repair or replacement at its factory of any part or parts of said products which shall be returned to Eaton with transportation charges prepaid and which Eaton's examination shall disclose to its satisfaction to have been defective. This is Eaton's sole warranty. EATON MAKES NO OTHER WARRANTY OF ANY KIND WHATEVER,

EXPRESS OR IMPLIED; AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE AFORE-STATED OBLIGATION ARE HEREBY DISCLAIMED BY EATON AND EXCLUDED FROM THIS AGREEMENT. Eaton neither assumes or authorizes any persons to assume for it, any other obligation in connection with the sale of Eaton's products. This warranty shall not apply to any product or component thereof which has been repaired or altered out-

side of Eaton's factory in any manner, so as, in Eaton's judgement, to affect its serviceability or which has been subjected to misuse, negligence or accident, or to products made by Eaton which have been operated in a manner contrary to Eaton's printed instructions. Under no circumstances shall Eaton be liable for loss, damage, cost of repair, or consequential damages of any kind in connection with the sale, use, or repair of any product purchased from Eaton.

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.

Front cover photo courtesy of Roger Richards of Richards Photography.
*Teflon is a Dupont Trademark



INTRODUCTION

APPLICATION GUIDE

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)
- Patented 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 include fuel, lube, coolant and air lines

StartLite® Racing Hose



- Aeroquip Performance Product's popular light-weight racing hose
- Up to 45% lighter than stainless steel braided hose
- Flame retardant Nomex* cover with Kevlar*
- Patented AQP elastomer smooth bore inner tube
- -45°F to +300°F temperature rating
- Approved with reusable and light-weight crimp fittings
- Applications include fuel, lube, coolant and air lines

AQP® SOCKETLESS™ Racing Hose



- Easy to assemble with reusable *SOCKETLESS* fittings
- Textile braid reinforcement now available in a blue or black AQP elastomer cover
- Patented 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 include fuel, lube, coolant and air lines

A/C Hose



- NEW**
- 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 new A/C fittings to provide a superior performing combination

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
- Patented AQP elastomer smooth bore inner tube
- -45°F to +300°F temperature rating
- Approved with reusable steel fittings
- Applications include power steering, hydraulics, fuel, lube, coolant, air tools and DOT approved air brakes

Teflon* Racing Hose

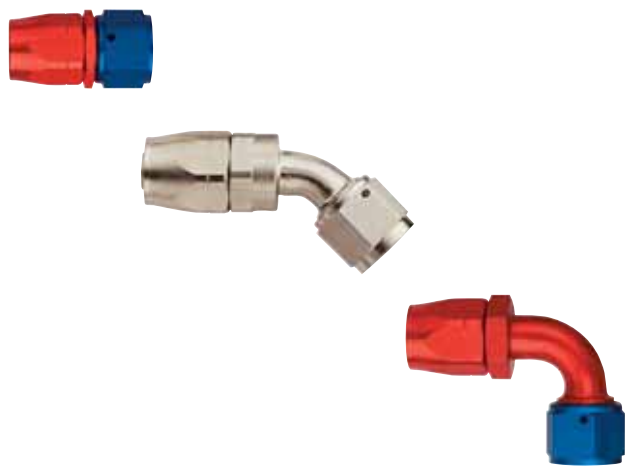


- Superior fluid compatibility, abrasion and corrosion resistance for reliable service
- Stainless steel outer cover for excellent abrasion resistance
- Extruded Teflon* smooth bore inner tube
- -100°F to +450°F temperature rating
- Approved with reusable and crimp fittings
- Excellent pressure rating (2500 psi in dash -06)
- Applications include: off road brake, transmission, clutch, gauge, N₂O, power steering, hydraulic, air conditioning

*Nomex, Kevlar and Teflon are DuPont trademarks

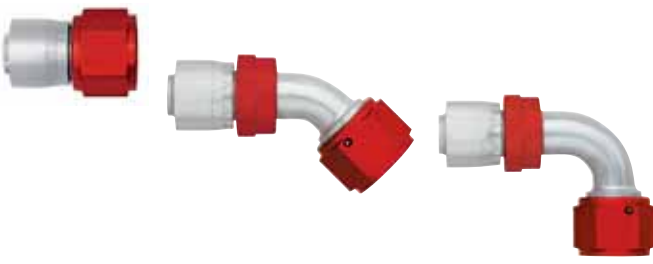
APPLICATION GUIDE

Reusable Aluminum Fittings



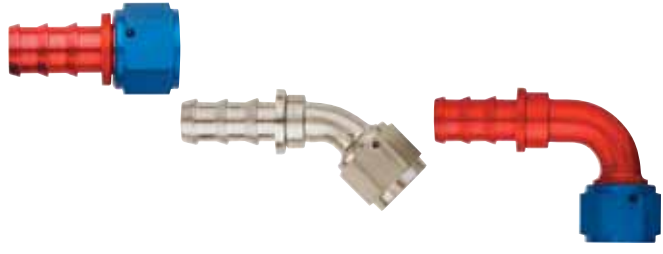
- One-piece design
 - Allows for improved flow
 - Eliminates two potential leak points (brazed joints)
 - Significantly improved appearance
- Electroless nickel plating or red/blue anodized finish
- Swivel and non-swivel styles available
- Designed to be re-used without damage to the fitting
- Easier to install than cutter style, more user friendly
- 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

Crimp Aluminum Fittings (lightweight)



- Lightweight and easy to use design
- Approved hose styles
 - AQP® Stainless Steel Racing Hose
 - StartLite® Racing Hose
- 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

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

A/C Fittings NEW



- Nickel plated for an eye-appealing 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

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

**APPROVED WITH
LIGHTWEIGHT CRIMP FITTINGS!**



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 a patented* 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

Hose Dash Size	Hose I.D.	Hose O.D.	Max. Operating Pressure	Min. Bend Radius	Weight Per Foot	Vacuum Service	Bulk Part Number	Package Length Part Number						
								2 FEET	3 FEET	6 FEET	10 FEET	15 FEET	20 FEET	50 FEET
	INCHES	INCHES	PSI	INCHES	POUNDS	INCHES/HG								
-04	.22	.44	1000/750 ¹	2.00	.11	21	FBA0400	—	FCA0403	FCA0406	FCA0410	FCA0415	FCA0420	FCA0450
-06	.34	.55	1000/750 ¹	2.50	.16	21	FBA0600	—	FCA0603	FCA0606	FCA0610	FCA0615	FCA0620	FCA0650
-08	.44	.65	1000/750 ¹	3.50	.17	21	FBA0800	—	FCA0803	FCA0806	FCA0810	FCA0815	FCA0820	FCA0850
-10	.56	.80	1000/750 ¹	4.00	.21	28	FBA1000	—	FCA1003	FCA1006	FCA1010	FCA1015	FCA1020	FCA1050
-12	.69	.94	1000/750 ¹	4.50	.29	28	FBA1200	—	FCA1203	FCA1206	FCA1210	FCA1215	FCA1220	FCA1250
-16	.88	1.15	750/750 ¹	5.50	.38	28	FBA1600	—	FCA1603	FCA1606	FCA1610	FCA1615	FCA1620	FCA1650
-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.

STRAIGHT FITTING

Hose Size	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Steel Swivel** S.A.E. 37° (JIC/AN)	Nickel-Plated Aluminum 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
-04	—	FCM1011	—	FBM4211
-06	FCM1012	FCM1075	FCE1012	FBM4212
-08	FCM1013	FCM1076	FCE1013	FBM4213
-10	FCM1014	—	FCE1014	FBM4214
-12	FCM1015	—	FCE1015	FBM4215
-16	FCM1016	—	—	FBM4216
-20	FCM1017	—	—	FBM4217

30° ELBOW FITTING

Hose Size	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable 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)
	Packaged Part Number	Packaged Part Number	Bulk Part Number	Bulk Part Number
-06	FCM4072	—	FBM4272	—
-08	FCM4073	—	FBM4273	—
-10	FCM4074	—	FBM4274	FBM4174
-12	FCM4075	—	FBM4275	FBM4175
-16	FCM4076	—	—	—
-20	—	FCM1147	—	—

Please see Pages 41-46 for assembly instructions.

¹ Rating for use with lightweight crimp fittings.

* Patent Number 4,366,746

** Aluminum socket

This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.



**APPROVED WITH
LIGHTWEIGHT CRIMP FITTINGS!**



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 a patented* 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 & FITTINGS

45° ELBOW FITTING

	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Non-Swivel S.A.E. 37° (JIC/AN)	Reusable** Steel Non-Swivel S.A.E. 37° (JIC/AN)	Nickel-Plated Aluminum 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	Packaged Part Number	Bulk Part Number	Bulk Part Number
-04	—	—	FCM1021	—	—	FBM4121 ¹
-06	FCM4022	FCM1022	FCM1079	FCE4022	FBM4222	—
-08	FCM4023	FCM1023	FCM1080	FCE4023	FBM4223	—
-10	FCM4024	FCM1024	—	FCE4024	FBM4224	FBM4124
-12	FCM4025	FCM1025	—	FCE4025	FBM4225	FBM4125
-16	FCM4026	FCM1026	—	—	FBM4226	—
-20	—	FCM1027	—	—	—	FBM4127

TechTip

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.

60° ELBOW FITTING

	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable 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	Bulk Part Number	Bulk Part Number
-06	FCM4082	—	FBM4282	—
-08	FCM4083	—	FBM4283	—
-10	FCM4084	—	FBM4284	FBM4184
-12	FCM4085	—	FBM4285	FBM4185
-16	FCM4086	—	—	—
-20	—	FCM1148	—	—

Please see Pages 41-46 for assembly instructions.

¹ Only available in steel
* Patent Number 4,366,746
**Aluminum socket

Bulk or Retail Packaged Parts
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AQP® RACING HOSE AND FITTINGS (CONT.)

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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 a patented* 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

90° ELBOW FITTING

	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Non-Swivel S.A.E. 37° (JIC/AN)	Reusable** Steel Non-Swivel S.A.E. 37° (JIC/AN)	Nickel-Plated Aluminum 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	Packaged Part Number	Bulk Part Number	Bulk Part Number
-04	—	—	FCM1031	—	—	FBM4131 ¹
-06	FCM4032	FCM1032	FCM1083	FCE4032	FBM4232	—
-08	FCM4033	FCM1033	FCM1084	FCE4033	FBM4233	—
-10	FCM4034	FCM1034	—	FCE4034	FBM4234	FBM4134
-12	FCM4035	FCM1035	—	FCE4035	FBM4235	FBM4135
-16	FCM4036	FCM1036	—	—	FBM4236	—
-20	—	FCM1037	—	—	—	FBM4137

120° ELBOW FITTING

	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable 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	Bulk Part Number	Bulk Part Number
-04	—	—	—	FBM4141 ¹
-06	FCM4042	FCM1042	FBM4242	—
-08	FCM4043	FCM1043	FBM4243	—
-10	FCM4044	FCM1044	FBM4244	FBM4144
-12	FCM4045	FCM1045	FBM4245	FBM4145
-16	FCM4046	FCM1046	FBM4246	—
-20	—	FCM1047	—	—

Please see Pages 41-46 for assembly instructions.

¹ Only available in steel

* Patent Number 4,366,746

**Aluminum socket

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EATON Aeroquip Performance Products A-SPPE-MC001-E2 May 2006

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Applications:




Fuel, lube, coolant, air

HOSE & FITTINGS

150° ELBOW FITTING

	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Non-Swivel S.A.E. 37° (JIC/AN)	Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)
			
Hose Size	Packaged Part Number	Packaged Part Number	Bulk Part Number
-04	—	—	FBM4151 ¹
-06	FCM4052	FCM1052	FBM4252
-08	FCM4053	FCM1053	FBM4253
-10	FCM4054	FCM1054	FBM4254
-12	FCM4055	FCM1055	FBM4255
-16	FCM4056	FCM1056	FBM4256

180° ELBOW FITTING

	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Non-Swivel S.A.E. 37° (JIC/AN)	Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)
			
Hose Size	Packaged Part Number	Packaged Part Number	Bulk Part Number
-06	FCM4062	FCM1062	—
-08	FCM4063	FCM1063	FBM4263
-10	FCM4064	FCM1064	FBM4264
-12	FCM4065	FCM1065	FBM4265
-16	FCM4066	FBM1028	FBM4266



Please see Pages 41-46 for assembly instructions.

¹ Only available in steel non-swivel.

*Patent Number 4,366,746

Bulk or Retail Packaged Parts

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STARTLITE® RACING HOSE AND FITTINGS

THE LIGHTWEIGHT CHAMPION!



Lightweight and Durable;
The choice of professionals
Race proven - approved by NASCAR, NHRA, IHRA and other sanctioning bodies. Pre-dyed black Nomex* cover with a red tracer braid to ensure peak performance and a consistent fade-resistant appearance. Increased abrasion resistance and overall hose strength by adding

Kevlar* to the fire-retardant Nomex* cover. Eaton's Aerospace AQP® patented technology provides a smooth, firm, higher performing inner tube. StartLite hose assemblies are up to 45% lighter in weight than conventional high performance assemblies.†

Applications:
 Fuel, lube, coolant, air

HOSE SPECIFICATIONS

ORDERING INFORMATION

Hose Dash Size	Hose I.D.	Hose O.D.	Max. Operating Pressure	Min. Bend Radius	Weight Per Foot	Vacuum Service	Bulk Part Number	Package Length Part Number			
								6 FEET	10 FEET	15 FEET	20 FEET
	INCHES	INCHES	PSI	INCHES	POUNDS	INCHES/HG					
-04	.22	.43	200	2.00	.05	20	FCU0400	FCU0406	FCU0410	FCU0415	FCU0420
-06	.34	.55	200	2.50	.08	20	FBU0600	FCU0606	FCU0610	FCU0615	FCU0620
-08	.44	.64	200	3.50	.09	20	FBU0800	FCU0806	FCU0810	FCU0815	FCU0820
-10	.56	.80	200	4.00	.14	20	FBU1000	FCU1006	FCU1010	FCU1015	FCU1020
-12	.69	.93	200 ¹ /100 ²	4.50	.16	20	FBU1200	FCU1206	FCU1210	FCU1215	FCU1220
-16	.88	1.15	200 ¹ /100 ²	5.50	.19	20	FBU1600	FCU1606	FCU1610	FCU1615	FCU1620
-20	1.13	1.41	200	5.50	.25	20	FBU2000	FCU2006	FCU2010	FCU2015	FCU2020

Construction: AQP elastomer inner tube and Nomex* hose construction.
Temperature Range: -45°F to +300°F (-43°C to +150°C).
 AQP patent #4,366,746

¹Option 1: For ultimate weight savings, select AQP lightweight crimp fittings.
²Option 2: For field serviceability, select AQP reusable fittings.

STRAIGHT FITTING

Hose Size	Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable** Steel Swivel S.A.E. 37° (JIC/AN)	Nickel-Plated Aluminum Swivel S.A.E. 37° (JIC/AN)
	Bulk Part Number	Packaged Part Number	Packaged Part Number	Packaged Part Number
-04	FBM4211	—	FCM1011	—
-06	FBM4212	FCM1012	FCM1075	FCE1012
-08	FBM4213	FCM1013	FCM1076	FCE1013
-10	FBM4214	FCM1014	—	FCE1014
-12	FBM4215	FCM1015	—	FCE1015
-16	FBM4216	FCM1016	—	—
-20	FBM4217	FCM1017	—	—

30° ELBOW FITTING

Hose Size	Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)	Lightweight Crimp Non-Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Non-Swivel S.A.E. 37° (JIC/AN)
	Bulk Part Number	Bulk Part Number	Packaged Part Number	Packaged Part Number
-06	FBM4272	—	FCM4072	—
-08	FBM4273	—	FCM4073	—
-10	FBM4274	FBM4174	FCM4074	—
-12	FBM4275	FBM4175	FCM4075	—
-16	—	—	FCM4076	—
-20	—	—	—	FCM1147

Please see Pages 41-46 for assembly instructions.

* Nomex and Kevlar are DuPont trademarks

† Specific weight savings are dependent on overall length of assembly.

**Aluminum socket

This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.



THE LIGHTWEIGHT CHAMPION!



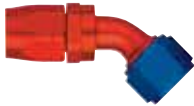
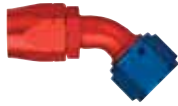




Lightweight and Durable;
The choice of professionals
Race proven - approved by NASCAR, NHRA, IHRA and other sanctioning bodies. Pre-dyed black Nomex* cover with a red tracer braid to ensure peak performance and a consistent fade-resistant appearance. Increased abrasion resistance and overall hose strength by adding Kevlar* to the fire-



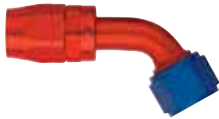

retardant Nomex* cover. Eaton's Aerospace AQP® patented technology provides a smooth, firm, higher performing inner tube. StartLite hose assemblies are up to 45% lighter in weight than conventional high performance assemblies.†

Applications:
 Fuel, lube, coolant, air

45° ELBOW FITTING

	Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)	Lightweight Crimp Non-Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Non-Swivel S.A.E. 37° (JIC/AN)	Reusable** Steel Non-Swivel S.A.E. 37° (JIC/AN)	Nickel-Plated Aluminum Swivel S.A.E. 37° (JIC/AN)
						
Hose Size	Bulk Part Number	Bulk Part Number	Packaged Part Number	Packaged Part Number	Packaged Part Number	Packaged Part Number
-04	—	FBM4121 ¹	—	—	FCM1021	—
-06	FBM4222	—	FCM4022	FCM1022	FCM1079	FCE4022
-08	FBM4223	—	FCM4023	FCM1023	FCM1080	FCE4023
-10	FBM4224	FBM4124	FCM4024	FCM1024	—	FCE4024
-12	FBM4225	FBM4125	FCM4025	FCM1025	—	FCE4025
-16	FBM4226	—	FCM4026	FCM1026	—	—
-20	—	FBM4127	—	FCM1027	—	—

60° ELBOW FITTING

	Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)	Lightweight Crimp Non-Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Non-Swivel S.A.E. 37° (JIC/AN)
				
Hose Size	Bulk Part Number	Bulk Part Number	Packaged Part Number	Packaged Part Number
-06	FBM4282	—	FCM4082	—
-08	FBM4283	—	FCM4083	—
-10	FBM4284	FBM4184	FCM4084	—
-12	FBM4285	FBM4185	FCM4085	—
-16	—	—	FCM4086	—
-20	—	—	—	FCM1148

Please see Pages 41-46 for assembly instructions.

¹ Only available in steel
 * Nomex and Kevlar are DuPont trademarks

† Specific weight savings are dependent on overall length of assembly.

**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.

STARTLITE® RACING HOSE AND FITTINGS (CONT.)

THE LIGHTWEIGHT CHAMPION!



Lightweight and Durable;
The choice of professionals
Race proven - approved by NASCAR, NHRA, IHRA and other sanctioning bodies. Pre-dyed black Nomex* cover with a red tracer braid to ensure peak performance and a consistent fade-resistant appearance. Increased abrasion resistance and overall hose strength by adding Kevlar* to the fire-retardant

Nomex* cover. Eaton's Aerospace AQP® patented technology provides a smooth, firm, higher performing inner tube. StartLite hose assemblies are up to 45% lighter in weight than conventional high performance assemblies.†

Applications:
 Fuel, lube, coolant, air

90° ELBOW FITTING

	Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)	Lightweight Crimp Non-Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Non-Swivel S.A.E. 37° (JIC/AN)	Reusable** Steel Non-Swivel S.A.E. 37° (JIC/AN)	Nickel-Plated Aluminum Swivel S.A.E. 37° (JIC/AN)
Hose Size	Bulk Part Number	Bulk Part Number	Packaged Part Number	Packaged Part Number	Packaged Part Number	Packaged Part Number
-04	—	FBM4131 ¹	—	—	FCM1031	—
-06	FBM4232	—	FCM4032	FCM1032	FCM1083	FCE4032
-08	FBM4233	—	FCM4033	FCM1033	FCM1084	FCE4033
-10	FBM4234	FBM4134	FCM4034	FCM1034	—	FCE4034
-12	FBM4235	FBM4135	FCM4035	FCM1035	—	FCE4035
-16	FBM4236	—	FCM4036	FCM1036	—	—
-20	—	FBM4137	—	FCM1037	—	—

120° ELBOW FITTING

	Lightweight Crimp Swivel S.A.E. 37° (JIC/AN)	Lightweight Crimp Non-Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Swivel S.A.E. 37° (JIC/AN)	Reusable Aluminum Non-Swivel S.A.E. 37° (JIC/AN)
Hose Size	Bulk Part Number	Bulk Part Number	Packaged Part Number	Packaged Part Number
-04	—	FBM4141 ¹	—	—
-06	FBM4242	—	FCM4042	FCM1042
-08	FBM4243	—	FCM4043	FCM1043
-10	FBM4244	FBM4144	FCM4044	FCM1044
-12	FBM4245	FBM4145	FCM4045	FCM1045
-16	FBM4246	—	FCM4046	FCM1046
-20	—	—	—	FCM1047

Please see Pages 41-46 for assembly instructions.

¹ Only available in steel
 * Nomex and Kevlar are DuPont trademarks

† Specific weight savings are dependent on overall length of assembly.

**Aluminum socket



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.

This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.

THE LIGHTWEIGHT CHAMPION!



Lightweight and Durable;
The choice of professionals
Race proven - approved by NASCAR, NHRA, IHRA and other sanctioning bodies. Pre-dyed black Nomex* cover with a red tracer braid to ensure peak performance and a consistent fade-resistant appearance. Increased abrasion resistance and overall hose strength by adding Kevlar* to the fire-retardant

Nomex* cover. Eaton's Aerospace AQP® patented technology provides a smooth, firm, higher performing inner tube. StartLite hose assemblies are up to 45% lighter in weight than conventional high performance assemblies.†

Applications:
 Fuel, lube, coolant, air

150° ELBOW FITTING

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



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



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



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

180° ELBOW FITTING

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



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



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



Hose Size	Bulk Part Number	Packaged Part Number	Packaged Part Number
-06	—	FCM4062	FCM1062
-08	FBM4263	FCM4063	FCM1063
-10	FBM4264	FCM4064	FCM1064
-12	FBM4265	FCM4065	FCM1065
-16	FBM4266	FCM4066	FCM1028



Please see Pages 41-46 for assembly instructions.

¹ Only available in steel non-swivel.

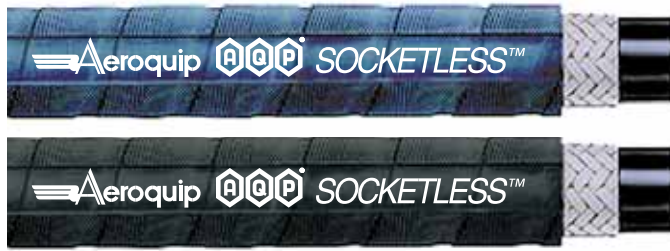
* Nomex and Kevlar are DuPont trademarks

† Specific weight savings are dependent on overall length of assembly.

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 AND FITTINGS



Quick and easy assembly that can save you time.
 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

Hose Dash Size	Hose I.D.	Hose O.D.	Max. Operating Pressure	Min. Bend Radius	Vacuum Service*
	INCHES	INCHES	PSI	INCHES	INCHES/HG
-04	.25	.49	250	3.00	28
-06	.38	.62	250	3.00	28
-08	.50	.75	250	5.00	28
-10	.63	.91	250	6.00	18
-12	.75	1.03	250	7.00	18

ORDERING INFORMATION

Bulk Part Number	Black	Package Length Part Number			
		Blue	Black	Blue	Black
		15 FEET	15 FEET	20 FEET	20 FEET
FBV0400	—	—	—	—	—
FBV0600	FBN0600	FCV0615	FCN0615	FCV0620	FCN0620
FBV0800	FBN0800	FCV0815	FCN0815	FCV0820	FCN0820
FBV1000	FBN1000	FCV1015	FCN1015	FCV1020	FCN1020
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).

STRAIGHT FITTING

	<i>SOCKETLESS</i> Aluminum S.A.E. 37° (JIC/AN)	<i>SOCKETLESS</i> Nickel-Plated Aluminum S.A.E. 37° (JIC/AN)	<i>SOCKETLESS</i> Brass Male Pipe	<i>SOCKETLESS</i> Brass Male Flare S.A.E. 37° (JIC/AN)	<i>SOCKETLESS</i> Brass Swivel S.A.E. 37° (JIC/AN)	<i>SOCKETLESS</i> Brass Male Inverted Flare	
Hose Size	Packaged Part Number	Packaged Part Number	Bulk Part Number	Pipe Thread Size	Bulk Part Number	Bulk Part Number	Bulk Part Number
-04	—	—	FBM1200 FBM1201	1/8 1/4	FBM1444	FBM1231 ¹	FBM1211
-06	FCM1512	FCE1512	FBM1207 FBM1202	1/4 3/8	FBM1445	FBM1222	FBM1212
-08	FCM1513	FCE1513	FBM1206 FBM1203	3/8 1/2	—	FBM1233 ¹	FBM1213
-10	FCM1514	FCE1514	FBM1204	1/2	—	FBM1234 ¹	FBM1214
-12	FCM1515	FCE1515	FBM1205	3/4	—	FBM1225	—

Please see Pages 41-46 for assembly instructions.
¹These fittings mate with both 37° and 45° male flares.

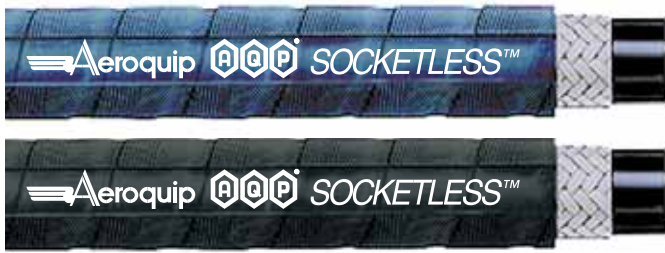


TechTip

Aerolube
 AQP SOCKETLESS hose and fittings are manufactured for a tight tolerance. Always apply a liberal amount of Aerolube on the barbed nipple as well as the inside of the hose. This will allow for a smoother assembly.



AQP® SOCKETLESS™ HOSE AND FITTINGS (CONT.)



Quick and easy assembly that can save you time.
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.

45° ELBOW FITTING

SOCKETLESS
 Aluminum
 S.A.E. 37° (JIC/AN)



Hose Size	Packaged Part Number
-04	—
-06	FCM1522
-08	FCM1523
-10	FCM1524
-12	FCM1525

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



Packaged Part Number
—
FCE1522
FCE1523
FCE1524
FCE1525

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



Bulk Part Number
FBM1438
FBM1439
FBM1440
—
—

120° ELBOW FITTING

SOCKETLESS
 Aluminum
 S.A.E. 37° (JIC/AN)



Hose Size	Packaged Part Number
-06	FCM1542
-08	FCM1543
-10	FCM1544
-12	FCM1545

90° ELBOW FITTING

SOCKETLESS
 Aluminum
 S.A.E. 37° (JIC/AN)



Hose Size	Packaged Part Number
-04	—
-06	FCM1532
-08	FCM1533
-10	FCM1534
-12	FCM1535

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



Packaged Part Number
—
FCE1532
FCE1533
FCE1534
FCE1535

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



Bulk Part Number
FBM1441
FBM1442
FBM1443
—
—

150° ELBOW FITTING

SOCKETLESS
 Aluminum
 S.A.E. 37° (JIC/AN)



Hose Size	Packaged Part Number
-06	FCM1552
-08	FCM1553
-10	FCM1554
-12	FCM1555

STRAIGHT -08 TO -06¹

SOCKETLESS
 Brass
 Female Flare



Hose Size	Bulk Part Number	Thread Size
-06	FBM1232	3/4-16

180° ELBOW FITTING

SOCKETLESS
 Aluminum
 S.A.E. 37° (JIC/AN)



Hose Size	Packaged Part Number
-06	FCM1562
-08	FCM1563
-10	FCM1564
-12	FCM1565

Please see Pages 41-46 for assembly instructions.

¹These fittings mate with both 37° (AN) and 45° male flares.

Bulk or Retail Packaged Parts

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A/C HOSE AND FITTINGS



*Patent Pending

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 superior 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: A/C

HOSE SPECIFICATIONS

Hose Dash Size	Hose I.D.	Hose O.D.	Maximum Operating Pressure	Minimum Bend Radius	Weight Per Foot	Bulk Part Number	Package Length Part Number		
							3 FEET	6 FEET	9 FEET
	INCHES	INCHES	PSI	INCHES	POUNDS				
-06	.33	.44	500	4.00	.08	FBF0600	FCF0603	FCF0606	FCF0609
-08	.43	.54	500	5.25	.10	FBF0800	FCF0803	FCF0806	FCF0809
-10	.53	.63	500	6.50	.14	FBF1000	FCF1003	FCF1006	FCF1009

ORDERING INFORMATION

STRAIGHT FITTING



Reusable Nickel-Plated Steel Female O-ring Pilot



Hose Size	Packaged Part Number
-06	FCE1712
-08	FCE1713
-10	FCE1714

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



Hose Size	Packaged Part Number
-06	FCE1812
-08	FCE1813
-10	FCE1814

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



Hose Size	Packaged Part Number
-06	FCE1912
-08	FCE1913
-10	FCE1914

45° FITTING



Reusable Nickel-Plated Steel Female O-ring Pilot



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



Hose Assembly

After cutting FBF 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.

Please see Pages 41-46 for assembly instructions.

This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.

EATON Aeroquip Performance Products A-SPPE-MC001-E2 May 2006

A/C HOSE AND FITTINGS (CONT.)

90° FITTING **NEW**

Reusable Nickel-Plated Steel Female O-ring Pilot



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



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

135° FITTING **NEW**

Reusable Nickel-Plated Steel Female O-ring Pilot



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



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

REPLACEMENT BRASS SLEEVE **NEW**



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

REPLACEMENT O-RINGS **NEW**



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



TechTip

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).

Bulk or Retail Packaged Parts

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TEFLON* RACING HOSE AND FITTINGS

**APPROVED WITH CRIMP
AND REUSABLE FITTINGS!**



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 that resists abrasion and corrosion, providing optimum dependability.

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

HOSE SPECIFICATIONS

Hose Dash Size	Hose I.D.	Hose O.D.	Maximum Operating Pressure	Minimum Bend Radius	Vacuum Service	Bulk Part Number	Package Length Part 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).

ORDERING INFORMATION

STRAIGHT FITTING

Hose Size	Reusable Steel Male Pipe ¹		Reusable Steel Swivel S.A.E. 37° (JIC/AN) ¹		Reusable Steel Swivel S.A.E. 45° (JIC/AN)		Reusable Steel Inverted Flare S.A.E. Male		Reusable Stainless Steel Swivel S.A.E. 37° (JIC/AN)		Steel Crimp S.A.E. 37° (JIC/AN)	
	Packaged Part Number	Pipe Thread Size	Packaged Part Number	Packaged Part Number	Packaged Part Number	Packaged Part Number	Fitting Size	Packaged Part Number	Bulk Part Number			
-03	—	—	FCM1100	—	—	—	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



Hose Size Packaged Part Number

-03 FCM3091

17° ELBOW

Reusable Steel
10mm Banjo



Hose Size Packaged Part Number

-03 FCM3092

Please see Pages 41-46 for assembly instructions.

Note: Refer to Page 19 for replacement sleeves.

*Teflon is a DuPont trademark.

¹Brass nipple.

This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.

EATON Aeroquip Performance Products A-SPPE-MC001-E2 May 2006



TEFLON* RACING HOSE AND FITTINGS (CONT.)

**APPROVED WITH CRIMP
AND REUSABLE FITTINGS!**



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 that resists abrasion and corrosion, providing optimum dependability.

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

HOSE & FITTINGS

45° ELBOW

Reusable Steel S.A.E. 37° (JIC/AN)		Reusable Steel S.A.E. 45° (JIC/AN)		Reusable Steel Inverted Flare S.A.E. Male		Forged Adjustable Reusable Stainless Steel Swivel S.A.E. 37° (JIC/AN)		Steel Crimp S.A.E. 37° (JIC/AN)	
Hose Size	Packaged Part Number	Packaged Part Number	Packaged Part Number	Fitting Size	Packaged Part Number	Packaged Part Number	Bulk Part Number		
-03	FCM1110	—	—	—	FCM1140	—	FBM1126		
-04	FCM1111	—	—	—	FCM1146	—	FBM1127		
-06	FCM1112	FCM1114	FCM1155	-05	—	—	—		
-08	FCM1113 ¹	FCM1113 ¹	FCM1141	-06	—	—	—		
			FCM1142	-08	—	—	—		

90° ELBOW

Reusable Steel S.A.E. 37° (JIC/AN)		Reusable Steel S.A.E. 45° (JIC/AN)		Reusable Steel Inverted Flare S.A.E. Male		Forged Adjustable Reusable Stainless Steel Swivel S.A.E. 37° (JIC/AN)		Steel Crimp S.A.E. 37° (JIC/AN)	
Hose Size	Packaged Part Number	Packaged Part Number	Packaged Part Number	Fitting Size	Packaged Part Number	Packaged Part Number	Bulk Part Number		
-03	FCM1120	—	—	—	FCM1150	—	FBM1128		
-04	FCM1121	—	—	—	FCM1151	—	FBM1129		
-06	FCM1122	FCM1136	FCM1143	-05	—	—	—		
-08	FCM1123 ¹	FCM1123 ¹	FCM1144	-06	—	—	—		
			FCM1145	-08	—	—	—		



Please see Pages 41-46 for assembly instructions.

Note: Refer to Page 19 for replacement sleeves.

*Teflon is a DuPont trademark.

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.

TEFLON* RACING HOSE AND FITTINGS (CONT.)

Teflon* Racing Hose Assemblies

Completely assembled, ready to install.



SPECIFICATIONS

Assembly Part Number	Dash Size	Description
FBPA0300-1	-03	Straight S.A.E. 37° (Female AN) to Straight S.A.E. 37° (Female AN) Swivel
FBPA0400-1	-04	Straight S.A.E. 37° (Female AN) to Straight S.A.E. 37° (Female AN) Swivel
FBPA0345-1	-03	Straight S.A.E. 37° (Female AN) to 45° Tube Elbow S.A.E. 37° (Female AN)
FBPA0445-1	-04	Straight S.A.E. 37° (Female AN) to 45° Tube Elbow S.A.E. 37° (Female AN)
FBPA0390-1	-03	Straight S.A.E. 37° (Female AN) to 90° Tube Elbow S.A.E. 37° (Female AN)
FBPA0490-1	-04	Straight S.A.E. 37° (Female AN) to 90° Tube Elbow S.A.E. 37° (Female AN)
FBPC0300-1	-03	Straight S.A.E. 37° (Female AN) -4 size to Straight S.A.E. 37° (Female AN) Swivel -4 size with -03 Hose
FBPC0400-1	-03	Straight S.A.E. 37° (Female AN) -4 size to 90° Tube Elbow S.A.E. 37° (Female AN) -4 size with -03 Hose

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

Marine Power Trim Hose Lines



Aeroquip Performance Products Teflon*/stainless steel marine power trim hose assemblies for I/O power trim systems are completely factory-assembled in standard 14½" lengths in both 90° and 45° elbow configurations.

Application: Inboard/outboard power trim systems

HOSE SPECIFICATIONS

ORDERING INFORMATION

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	14½	Inverted Flare Straight to Inverted Flare 90° Elbow
-04	.19	.30	2,500	2.00	28	FCP0107	-03	14½	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).

Replacement Sleeves for Teflon* Fittings

REPLACEMENT SLEEVES (5 PER PACKAGE)



Brass Packaged Part Number	Hose Fitting Dash Size
FCM3720	-03
FCM3721	-04
FCM3823	-06
FCM3824	-08



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

*Teflon is a DuPont trademark.

¹Teflon hose assemblies are made-to order at the factory. Simply choose from the above part numbers and add your overall length (full inch increments only). For example, FBPA0300-24 is a 24" assembly.

TechTip

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 (O.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.

This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.

EATON Aeroquip Performance Products A-SPPE-MC001-E2 May 2006

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 a patented 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-the-wall air tools and DOT-approved air brake.

HOSE SPECIFICATIONS

Hose Dash Size	Hose I.D.	Hose O.D.	Maximum Operating Pressure	Minimum Bend Radius	Vacuum Service	Bulk Part Number	Package Length Part Number			
	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).

ORDERING INFORMATION

STRAIGHT FITTING

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



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	—	—

Reusable Steel Male Inverted Flare S.A.E.



45° ELBOW FITTING

Reusable Steel S.A.E. 37° (JIC/AN)



Hose Size	Bulk Part Number	Thread Size	Bulk Part Number	Thread Size
-06	FBM1386	9/16-18	FBM1382	5/8-18
-08	FBM1384	3/4-16	FBM1383	3/4-18
-10	FBM1338	7/8-14	—	—
-12	FBM1339	11/16-12	—	—

Reusable Steel Male Inverted Flare S.A.E.



90° ELBOW FITTING

Reusable Steel S.A.E. 37° (JIC/AN)



Hose Size	Bulk Part Number	Thread Size	Bulk Part Number	Thread Size
-06	FBM1389	9/16-18	FBM1392	5/8-18
-08	FBM1387	3/4-16	FBM1394	3/4-18
-10	FBM1374	7/8-14	—	—
-12	FBM1376	11/16-12	—	—

Reusable Steel Male Inverted Flare S.A.E.




HIGH PRESSURE ADAPTERS

Metric Conversion

A	B	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 O-Ring style porting

Inverted Flare

A	B	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 41-46 for assembly instructions.

Bulk or Retail Packaged Parts

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DIRECT PORT FITTINGS/ADAPTERS

90° MALE PIPE

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

45° ORB FITTING

Reusable Aluminum Swivel O-Ring



Hose Size	Bulk Part Number	Thread Size
-08	FBM1348	9/16-18
-08	FBM1349	3/4-16
-10	FBM1350	11/16-12
-10	FBM1351	7/8-14
-12	FBM1352	7/8-14
-12	FBM1353	11/16-12

90° ORB FITTING

Reusable Aluminum Swivel O-Ring



Hose Size	Bulk Part Number	Thread Size
-08	FBM1355	9/16-18
-08	FBM1356	3/4-16
-10	FBM1357	11/16-12
-10	FBM1358	7/8-14
-12	FBM1359	7/8-14
-12	FBM1360	11/16-12



This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.



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 50). 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 Aeroquip Performance Products dust caps (Page 36) when disconnecting a hose or fitting to help keep contaminants out of hose and adapters.

MALE AN TO PIPE (AN 816)

Aluminum Blue Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size INCHES
FCM2000	—	FCM2511	-03	1/8
FCM2001	—	FCM2512	-04	1/8
FCM2002	—	FCM2515	-04	1/4
—	—	FCM2519	-04	3/8
—	—	FCM2524	-04	1/2
—	—	FCM2513	-05	1/8
—	—	FCM2516	-05	1/4
—	—	FCM2520	-05	3/8
FCM2003	FCE2003	FCM2514	-06	1/8
FCM2004	FCE2004	FCM2517	-06	1/4
FCM2005	FCE2005	FCM2521	-06	3/8
FCM2013	—	FCM2525	-06	1/2
—	—	FCM2529	-06	3/4
FCM2006	—	FCM2518	-08	1/4
FCM2007	FCE2007	FCM2522	-08	3/8
FCM2008	FCE2008	FCM2526	-08	1/2
—	—	FCM2530	-08	3/4
FCM2185	FCE2185	FCM2523	-10	3/8
FCM2009	FCE2009	FCM2527	-10	1/2
—	—	FCM2531	-10	3/4
FCM2010	FCE2010	FCM2528	-12	1/2
FCM2011	FCE2011	FCM2532	-12	3/4
FCM2014	FCE2014	FCM2534	-12	1
—	—	FCM2539	-12	1-1/4
—	—	FCM2544	-12	1-1/2
FCM2015	—	FCM2533	-16	3/4
FCM2012	—	FCM2535	-16	1
—	—	FCM2540	-16	1-1/4
—	—	FCM2545	-16	1-1/2
—	—	FCM2536	-20	1
—	—	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
—	—	FCM2543	-32	1-1/4

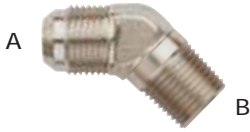


AN numbers are for configuration reference only.

Bulk or Retail Packaged Parts

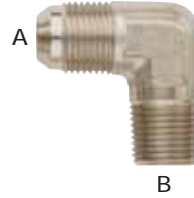
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ADAPTERS



45° MALE AN TO PIPE (AN 823)

Aluminum Blue Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size INCHES
FCM2020	—	FCM2581	-03	1/8
FCM2021	—	FCM2582	-04	1/8
—	—	FCM2584	-04	1/4
—	—	FCM2588	-04	3/8
—	—	FCM2583	-05	1/8
—	—	FCM2585	-05	1/4
FCM2022	FCE2022	FCM2586	-06	1/4
—	—	FCM2589	-06	3/8
—	—	FCM2592	-06	1/2
—	—	FCM2587	-08	1/4
FCM2023	FCE2023	FCM2590	-08	3/8
—	—	FCM2593	-08	1/2
—	—	FCM2596	-08	3/4
—	—	FCM2591	-10	3/8
FCM2024	FCE2024	FCM2594	-10	1/2
—	—	FCM2597	-10	3/4
—	—	FCM2595	-12	1/2
FCM2025	FCE2025	FCM2598	-12	3/4
—	—	FCM2600	-12	1
—	—	FCM2599	-16	3/4
FCM2026	—	FCM2601	-16	1
—	—	FCM2602	-20	1
—	—	FCM2603	-20	1-1/4



90° AN TO PIPE (AN 822)

Aluminum Blue Anodized Packaged Part Number	Aluminum Nickel-Plated Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size INCHES
FCM2030	—	FCM2610	-03	1/8
FCM2031	—	FCM2611	-04	1/8
FCM2032	—	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	FCE2033	FCM2613	-06	1/8
FCM2034	FCE2034	FCM2616	-06	1/4
FCM2035	FCE2035	FCM2620	-06	3/8
—	—	FCM2625	-06	1/2
FCM2036	—	FCM2617	-08	1/4
FCM2037	FCE2037	FCM2621	-08	3/8
FCM2038	FCE2038	FCM2626	-08	1/2
—	—	FCM2629	-08	3/4
FCM2016	—	FCM2622	-10	3/8
FCM2039	FCE2039	FCM2627	-10	1/2
—	—	FCM2630	-10	3/4
—	—	FCM2623	-12	3/8
FCM2017	FCE2017	FCM2628	-12	1/2
FCM2040	FCE2040	FCM2631	-12	3/4
—	—	FCM2633	-12	1
FCM2018	—	FCM2632	-16	3/4
FCM2041	—	FCM2634	-16	1
—	—	FCM2636	-16	1-1/4
—	—	FCM2635	-20	1
—	—	FCM2637	-20	1-1/4
—	—	FCM2639	-20	1-1/2
—	—	FCM2638	-24	1-1/4




AN numbers are for configuration reference only.


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90° ELBOW UNION (AN 821)

A		Aluminum Blue Anodized Packaged Part Number	"A"	"B"
			Dash Size	Dash Size
		FCM2186	-03	-03
		FCM2119	-04	-04
		FCM2120	-06	-06
		FCM2190	-08	-08
		FCM2191	-12	-12


FLARE UNION (AN 815)

A		Aluminum Blue Anodized Packaged Part Number	Steel Packaged Part Number	"A"	"B"
				Dash Size	Dash Size
		FCM2050	FCM2750	-03	-03
		FCM2051	FCM2751	-04	-04
		—	FCM2753	-05	-05
		FCM2052	FCM2756	-06	-06
		FCM2053	FCM2759	-08	-08
		FCM2054	FCM2761	-10	-10
		FCM2055	FCM2763	-12	-12
		FCM2056	FCM2765	-16	-16
		—	FCM2766	-20	-20


UNION REDUCER (AN 919)

A		Aluminum Blue Anodized Packaged Part Number	Steel Packaged Part Number	"A"	"B"
				Dash Size	Dash Size
		FCM2048	FCM2749	-04	-03
		—	FCM2752	-05	-04
		FCM2156	FCM2754	-06	-04
		—	FCM2755	-06	-05
		FCM2049	FCM2757	-08	-04
		FCM2160	FCM2758	-08	-06
		FCM2188	—	-10	-04
		FCM2162	—	-10	-06
		FCM2163	FCM2760	-10	-08
		FCM2189	—	-12	-04
		FCM2165	—	-12	-06
		FCM2166	—	-12	-08
		FCM2167	FCM2762	-12	-10
		FCM2169	—	-16	-10
		FCM2170	FCM2764	-16	-12

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

A		Aluminum Blue Anodized Packaged Part Number	"A"	"B"
			Pipe Size INCHES	Pipe Size INCHES
		FCM2147	1/8	1/8
		FCM2148	1/4	1/4
		FCM2149	3/8	3/8


FEMALE FLARE SWIVEL

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


45° FEMALE FLARE SWIVEL

A		Aluminum Packaged Part Number	"A"	"B"
			Dash Size	Dash Size
		FCM2971	-06	-06
		FCM2972	-08	-08
		FCM2973	-10	-10
		FCM2974	-12	-12

90° FEMALE FLARE SWIVEL

A		Aluminum Packaged Part Number	"A"	"B"
			Dash Size	Dash Size
		FCM2978	-06	-06
		FCM2979	-08	-08
		FCM2980	-10	-10
		FCM2981	-12	-12


O-RING BOSS TO MALE 37°

A		Aluminum Blue Anodized Packaged Part Number	Steel Packaged Part Number	"A"	"B"
				Dash Size	Dash Size
		FCM2953	FCM2957	-10	-10
		FCM2954	FCM2958	-10	-12
		FCM2955	FCM2959	-12	-12
		FCM2956	FCM2960	-12	-16


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

A		Aluminum Packaged Part Number	"A"	"B"
			Dash Size	Dash Size
		FCM2263	-12	-12

MALE PIPE NIPPLE (AN 911)

A		Aluminum Blue Anodized Packaged Part Number	"A"	"B"
			Pipe Size INCHES	Pipe Size INCHES
		FCM2132	1/8	1/8
		FCM2133	1/4	1/4
		FCM2134	3/8	3/8
		FCM2135	1/2	1/2

PIPE COUPLING (AN 910)


A		Aluminum Blue Anodized Packaged Part Number	"A"	"B"
			Pipe Size INCHES	Pipe Size INCHES
		FCM2129	1/8	1/8
		FCM2130	1/4	1/4
		FCM2131	3/8	3/8

Bulk or Retail Packaged Parts


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ADAPTERS


UNION TEE (AN 824)

	Aluminum Blue Anodized Packaged Part Number	"A" Dash Size	"B" Dash Size	"C" Dash Size
	FCM2060	-03	-03	-03
	FCM2061	-04	-04	-04
	FCM2062	-06	-06	-06
	FCM2063	-08	-08	-08
	FCM2064	-10	-10	-10
	FCM2065	-12	-12	-12
	FCM2066	-16	-16	-16


MALE BRANCH TEE (AN 825)

	Aluminum Blue Anodized Packaged Part Number	"A" Dash Size	"B" Dash Size INCHES	"C" Pipe Size
	FCM2187	-03	-03	1/8
	FCM2121	-04	-04	1/8
	FCM2122	-06	-06	1/4
	FCM2123	-08	-08	3/8


MALE RUN TEE (AN 826)

	Aluminum Blue Anodized Packaged Part Number	Steel Packaged Part No.	"A" Dash Size	"B" Pipe Size INCHES	"C" Dash Size
	FCM2714	FCM2700	-03	1/8	-03
	FCM2124	FCM2701	-04	1/8	-04
	---	FCM2703	-04	1/4	-04
	---	FCM2702	-05	1/8	-05
	FCM2125	FCM2704	-06	1/4	-06
	---	FCM2705	-06	3/8	-06
	FCM2126	FCM2706	-08	3/8	-08
	---	FCM2707	-08	1/2	-08
	---	FCM2708	-10	1/2	-10
	---	FCM2709	-10	3/4	-10
	---	FCM2710	-12	3/4	-12
	---	FCM2711	-16	1	-16
	---	FCM2712	-20	1-1/4	-20

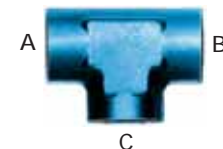
FEMALE PIPE FLARE TEE

	Steel Packaged Part No.	"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

	Steel Packaged Part Number	"A" Dash Size	"B" Pipe Size	"C" Dash Size INCHES
	FCM2817	-03	1/8	-03
	FCM2818	-04	1/8	-04
	FCM2819	-04	1/4	-04


FEMALE FLARE TEE¹

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

FEMALE PIPE TEE (AN 917)

	Aluminum Blue Anodized Packaged Part Number	"A" Pipe Size INCHES	"B" Pipe Size INCHES	"C" Pipe Size INCHES
	FCM2150	1/8	1/8	1/8
	FCM2151	1/4	1/4	1/4
	FCM2152	3/8	3/8	3/8

FEMALE ON THE RUN TEE

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

AN numbers are for configuration reference only.


¹Connects to Male AN Flare with hex and O-Ring. (AN 816, AN 919, AN 832 and O-Ring Boss Plug). Refer to Page 36 for O-Rings.




This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.

Bulkhead Adapters


BULKHEAD UNION¹ (AN 832)

	Aluminum Blue Anodized Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
	FCM2769	FCM2770	-03	-03
	FCM2071	FCM2771	-04	-04
	—	FCM2772	-04	-06
	—	FCM2773	-05	-05
	FCM2072	FCM2774	-06	-06
	FCM2073	FCM2775	-08	-08
	FCM2074	FCM2776	-10	-10
	FCM2075	FCM2777	-12	-12
	FCM2076	FCM2778	-16	-16
	—	FCM2779	-20	-

45° ELBOW BULKHEAD UNION¹ (AN 837)

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


90° ELBOW BULKHEAD UNION¹ (AN 833)

	Aluminum Blue Anodized Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	"B" Dash Size
	FCM2799	FCM2790	-03	-03
	FCM2081	FCM2791	-04	-04
	—	FCM2792	-05	-05
	FCM2082	FCM2793	-06	-06
	FCM2083	FCM2794	-08	-08
	FCM2084	FCM2795	-10	-10
	FCM2085	FCM2796	-12	-12
	FCM2086	FCM2797	-16	-16
	—	FCM2798	-20	-20


BULKHEAD TEE¹ (AN 834)

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


BULKHEAD RUN TEE¹ (AN 804)

	Aluminum Blue Anodized Packaged Part Number	Steel Packaged Part No.	"A" Dash Size	"B" Dash Size	"C" Dash Size
	FCM2815	FCM2809	-03	-03	-03
	FCM2117	—	-04	-04	-04
	FCM2118	FCM2811	-06	-06	-06
	FCM2180	FCM2812	-08	-08	-08
	—	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	Steel Packaged Part No.	Dash Size	Number Per Package
	FCM3556	FCM2095	-03	2
	FCM2099	FCM2096	-04	2
	—	FCM2097	-05	2
	FCM2100	FCM2098	-06	2
	FCM2103	FCM3584	-08	1
	FCM2104	FCM3585	-10	1
	FCM2105	FCM3586	-12	1
	FCM2106	FCM3587	-16	1
	—	FCM3588	-20	1

High Pressure Adapters

INVERTED FLARE

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

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. See Page 26 for locknuts.

²Locknut included.

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.

ADAPTERS

Metric Adapters


METRIC CONVERSION ADAPTERS

	Steel Packaged Part Number	"A" Dash Size	"B" Pipe Size
 A B	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 O-Ring style porting.

AN Tube Fittings

TUBE NUT (AN 818)¹


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

TUBE SLEEVE (AN 819)¹

	Aluminum Blue Anodized Packaged Part Number	Steel Packaged Part Number	"A" Dash Size	Number Per Package
 A	FCM3669	FCM3667	-03	6
	FCM3670	FCM3668	-04	6
	—	FCM3679	-05	2
	FCM3671	FCM3680	-06	2
	FCM3672	FCM3681	-08	2
	FCM3673	FCM3682	-10	2
	FCM3674	FCM3683	-12	2
	—	FCM3696	-14	1
	—	FCM3697	-16	1
	—	FCM3698	-20	1

Special Flare Adapters

FLARE TO BRAZE (UNPLATED)


	Steel Packaged Part Number	"A" Dash Size	"B" Tube O.D.	"C" Counterbore Depth
INCHES				
 A B C	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

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


²Aluminum tube caps are 2 piece.

³Versil-Flare tube nut and tube sleeve are only to be used together.


AN FLARE TO METRIC ADAPTERS

	Aluminum Blue Anodized Packaged Part Number	"A" Dash Size	"B" Pipe Size
 A B	FCM2239	-04	10MM x 1.0
	FCM2246	-06	12MM x 1.5
	FCM2240	-06	14MM x 1.5
	FCM2241	-06	16MM x 1.5
	FCM2242	-06	18MM x 1.5
	FCM2243	-08	16MM x 1.5
	FCM2244	-08	18MM x 1.5
	FCM2245	-10	18MM x 1.5


CAP (AN 929)²

	Aluminum Blue Anodized Packaged Part Number	Steel Packaged Part Number	No. Dash Size	No. Per Pkg. Alum.	Per Pkg. Steel
 A	FCM3751	FCM3479	-03	2	6
	FCM3752	FCM3480	-04	2	6
	—	FCM3601	-05	—	2
	FCM3740	FCM3602	-06	1	2
	FCM3741	FCM3603	-08	1	2
	FCM3742	FCM3604	-10	1	2
	FCM3743	FCM3605	-12	1	2
	FCM3744	FCM3566	-16	1	1
	—	FCM3567	-20	—	1

VERSIL•FLARE™ FLARELESS TUBE NUT³

	Part Number	Dash Size	Tube O.D.	Thread	A
 A	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	1 1/16-12	1.35

VERSIL•FLARE™ FLARELESS TUBE FERRULE³

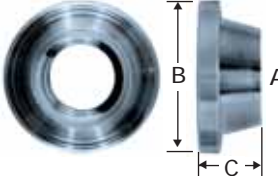
	Part Number	Dash Size	Tube O.D.	A	B
 37° B A	FCM2491	-04	.25	.82	.25
	FCM2492	-06	.38	.86	.38
	FCM2493	-08	.50	1.08	.50
	FCM2494	-10	.63	1.12	.62
	FCM2495	-12	.75	1.36	.75

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 33 for O-Rings.

TANK WELDING BUNGS (AN 871)

	Packaged Part Number	"A" Dash Size	"B"	"C"
 A 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

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



Steel Packaged Part No.	"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 Packaged Part No.	"A" Dash Size	"B" Dash Size
FCM2421	-10	-08
FCM2422	-12	-10

FEMALE PIPE TO MALE AN



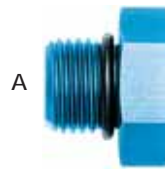
Steel Packaged Part No.	"A" Dash Size	"B" Dash Size
		INCHES
FCM2719	-03	1/8
FCM2720	-03	1/4
FCM2721	-04	1/8
FCM2722	-05	1/8
FCM2723	-04	1/4
FCM2724	-05	1/4
FCM2725	-06	1/4
FCM2726	-08	1/4
FCM2727	-06	3/8
FCM2728	-08	3/8
FCM2729	-06	1/2
FCM2730	-08	1/2
FCM2731	-10	1/2
FCM2732	-12	1/2
FCM2733	-08	3/4
FCM2734	-10	3/4
FCM2735	-12	3/4
FCM2736	-16	1
FCM2737	-20	1-1/4

FLARE PLUG (AN 806)



Aluminum Blue Anodized Packaged Part No.	Steel Packaged Part No.	"A" Dash Size
FCM3712	FCM3701	-03
FCM3713	FCM3702	-04
FCM3714	FCM3703	-06
FCM3715	FCM3704	-08
FCM3716	FCM3705	-10
FCM3717	FCM3706	-12
FCM3718	FCM3707	-16
—	FCM3708	-20

O-RING BOSS PLUG (AN 814)



Aluminum Blue Anodized Packaged Part No.	"A" Dash Size
FCM3722	-03
FCM3723	-04
FCM3724	-06
FCM3725	-08
FCM3726	-10
FCM3727	-12

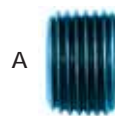
For replacement O-Rings see Page 36.

PIPE BUSHING (AN 912)



Aluminum Blue Anodized Packaged Part No.	"A" Pipe Size	"B" Pipe Size
	INCHES	INCHES
FCM2136	1/4	1/8
FCM2137	3/8	1/4
FCM2138	3/8	1/8
FCM2139	1/2	3/8
FCM2140	1/2	1/4
FCM2141	1/2	1/8
FCM2144	3/4	1/4
FCM2143	3/4	3/8
FCM2142	3/4	1/2
FCM2146	1	1/2
FCM2145	1	3/4

ALLEN HEAD PIPE PLUG (AN 932)



Aluminum Blue Anodized Packaged Part No.	"A" Pipe Size	Number Per Package
	INCHES	
FCM3684	1/16	2
FCM3685	1/8	2
FCM3686	1/4	2
FCM3687	3/8	2
FCM3749	1/2	1
FCM3750	3/4	1



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Bulk or Retail Packaged Parts

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ADAPTERS

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
	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
	FCM2931	-04	1/2 - 20	1.16


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

[1 per package]	Steel Packaged Part Number	"A" Hose Fitting Dash Size	"B" Brake Thread 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 Packaged Part Number	"A" Hose Fitting Dash Size	"B" Brake Thread 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


[2 per package]	Steel Packaged Part Number	"A" Hose Fitting Dash Size	"B" Brake Thread Size
	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 Packaged Part Number	"A" Hose Fitting Dash Size	"B" Brake Thread 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]	Steel Packaged Part Number	"A" Thread Size	Crushwasher ² Part Number
	FCM2921	3/8-24	FCM3642
	FCM2922	7/16-20	FCM3513

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

METRIC BANJO BOLT







[1 per package]	Steel Packaged Part Number	"A" Thread Size	Crushwasher ² Part Number
	FCM2923	10mm x 1.25	FCM3642
	FCM2968	10mm x 1.5	FCM3642

¹This part has small hex.







²Two crushwashers are required.

Aluminum Carburetor Adapters

CARBURETOR ADAPTERS

	Packaged Part Number	Hose Fitting Size	Application
	FCM2113	-06	Holley Single Feed 600-660 Series, 4010/4011 Series and all two barrel series with 9/16-24 thread Replacement Crushwasher FCM3514
	FCM2114	-06	Holley Dual Feed 750 through Dominator 1350 Series and Quadrajets up to 1974 with 7/8-20 thread Replacement Crushwasher FCM3516
	FCM2961	-08	Holley Dual Feed 750 through Dominator 1350 Series and Quadrajets up to 1974 with 7/8-20 thread; available in steel only Replacement Crushwasher FCM3516
	FCM2110	-08	Holley Dual Feed 750 through Dominator 1350 Series and Quadrajets up to 1974 with 7/8-20 thread Replacement Crushwasher FCM3516
	FCM2193	-06	Holley Dual Feed 750 through Dominator 1350 Series and Quadrajets up to 1974 with 7/8-20 thread Replacement Crushwasher FCM3516
	FCM2192	-08	Holley Dual Feed 750 through Dominator 1350 Series and Quadrajets up to 1974 with 7/8-20 thread Replacement Crushwasher FCM3516

CARBURETOR ADAPTERS

	Packaged Part Number	Hose Fitting Size	Application
	FCM2107	-06	Quadrajets 1975 and later 1-20 thread Replacement Crushwasher FCM3517
	FCM2112	-06	Carter AFB two and four barrel with 5/8-20 thread Replacement O-Ring FCM3489
	FCM2116	-06	Weber Bowl Fitting 12mm x 1.5 thread
	FCM2247	-06	Demon carburetors or applications with 9/16-24 threads and -06 female swivel Replacement Crushwasher FBM3514
	FCM2248	-08	Demon carburetors or applications with 9/16-24 threads and -08 female swivel Replacement Crushwasher FBM3514
	FCM2249	-08	Demon carburetors or applications with 9/16-24 threads and -08 male swivel Replacement Crushwasher FBM3514



Bulk or Retail Packaged Parts

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FUEL SYSTEM COMPONENTS

Aluminum Banjo Fittings




BANJO FITTINGS

	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 Replacement Crushwasher FCM3627
	FCM1067	-06	Banjo Fitting for Weber bowls with 12mm x 1.5 thread Replacement Crushwasher
	FCM1070	-06	Banjo Fitting for Solex Carburetors with 12mm x 1.25 thread Replacement Crushwasher FCM3627
	FCM1069	-06	Banjo Fitting for multiple carb application Holley 600-660 Series with 9/16 - 24 thread Replacement Crushwasher FCM3627
	FCM1068	-06	Banjo Fitting for multiple carb application Weber 12mm x 1.5 thread Replacement Crushwasher FCM3627


Refer to Page 36 for Replacement Crushwashers and Replacement O-Rings.

Aluminum Fuel Pump Adapters


FUEL PUMP ADAPTERS

	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	"A" Hose Fitting Dash Size	"B" Brake Thread Size	Length INCHES
	FCM2181	-03	1/2-20	1.07
	FCM2182	-04	1/2-20	1.14

MALE NICKEL-PLATED FUEL PUMP ADAPTER

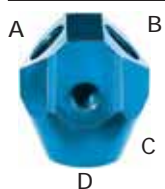
	Packaged Part Number	Hose Fitting Dash Size	Thread Size INCHES
	FCE2185	-10	3/8



This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.

Aluminum Fuel Blocks

FUEL BLOCKS



Aluminum Blue Anodized 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	3/8	3/8	1/8	1/2

Aluminum In-Line Fuel Pressure Adapter

IN-LINE FUEL PRESSURE ADAPTER



Aluminum Blue Anodized Packaged Part Number	"A" Dash Size	"B" Dash Size	"C" Pipe Size INCHES
FCM2183	-06	-06	1/8
FCM2184	-08	-08	1/8

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)

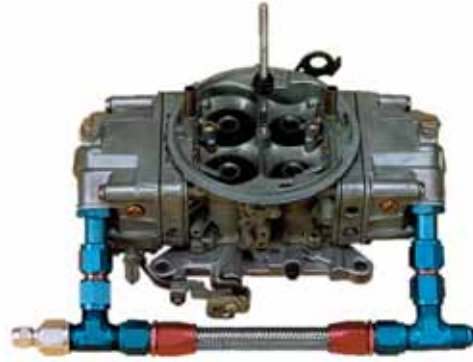


Bulk or Retail Packaged Parts
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FUEL SYSTEM COMPONENTS

Dual Feed Carburetor Assemblies

Completely assembled—ready to install.



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



Packaged Part Number	Carburetor Application	Distance Between Bowl Fittings INCHES	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	Carburetor Application	Distance Between Bowl Fittings INCHES	Hose and Fitting Dash Size
FCP0134	800 & 850 CFM Holley	9.25	-08

This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.

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

Great for street cars, hot rods, boats, race-cars, 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 1.25 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	—	—	—	—
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 <i>SOCKETLESS™</i> Hose (dash 10)		—	—	—	—

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

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

Teflon* Racing Hose Hydraulic Brake and Clutch Coupling

Hydraulic brake couplings seal themselves to allow brake or clutch lines to be removed and reinstalled

without the need to bleed the lines. Both ends have -04 S.A.E. 37° (JIC/AN) threads.



HYDRAULIC BRAKE AND CLUTCH COUPLING

Steel Bulk Part Number	Hose Fitting Dash Size	Maximum Operating Pressure ¹	Air Inclusion C.C. Max. PSI	Fluid Loss C.C. Max.	Length Connector	Seal Material INCHES
FBM3079	-04	3000	.10	.05	3.52	EPR

Maximum operating pressure disconnected: Male 2500 psi; Female 500 psi

*Teflon is a DuPont trademark.

¹Operating pressure when connected.

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 disconnection.

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 non-petroleum brake fluids.



Connected



Disconnected

HYDRAULIC BRAKE AND CLUTCH COUPLING

Steel Bulk Part Number	Hose Fitting Dash Size	Max. Operating Pressure	Air Inclusion (C.C. Max.) PSI	Fluid Loss (C.C.) Max.	Length Connector	Total Weight INCHES	Seal Material INCHES
FBM1073	-03	3000	.02	.10	4.10	.34	EPR
FBM1074	-04	3000	.02	.10	4.25	.36	EPR

Replacement Parts

FBM1115	-03 Male Half (Bulkhead Mount)
FBM1116	-04 Male Half (Bulkhead Mount)
FBM1117	-03 Female Half
FBM1118	-04 Female Half

Bulk or Retail Packaged Parts

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

COUPLINGS

Quick-Disconnect Radiator/Cooling Refill Coupling



Female Half:

- Aluminum female quick-disconnect 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

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
FCM3081	1/4	Female Coupling to Female Pipe
FCM3082	1/4	Female Coupling to Female Pipe
FCM3083	1/4	Male Coupling to Male Pipe
FCM3084	1/4	Male Coupling to Male Pipe
FCM3085	1/4	Male Coupling to Female Pipe
FCM3086	1/4	Male Coupling to Female Pipe
FCM3087	1/4	Male Coupling — Dust Cap

SPECIFICATIONS

Thread Size INCHES	Maximum Operating Pressure PSI	Air Inclusion (C.C. Max)	Fluid Loss (C.C. Max)	Length INCHES
1/8-27-NPTF	7000	.02	.1	1.95
1/4-18-NPTF	7000	.02	.1	2.25
1/8-27-NPTF	7000	.02	.1	1.60
1/4-18-NPTF	7000	.02	.1	1.49
1/8-27-NPTF	7000	.02	.1	1.70
1/4-18-NPTF	7000	.02	.1	1.90
—	—	—	—	—

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.

Ideal for use with FCM2178, FCM2179, FCM2183 and FCM2184.



ORDERING INFORMATION AND SPECIFICATIONS

Packaged Part Number	Description	Max. Thread Size INCHES	Operating Pressure PSI	Air Inclusion (C.C. Max)	Fluid Loss (C.C. Max)	Length 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 INCHES	Air Inclusion (C.C. Max.) PSI	Fluid Loss (C.C. Max.)	Rated Flow GPM	Coupled Length INCHES	Vacuum Service 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	1-11/2	4000	14.2	14.2	50	5.54	28

Note: Not recommended for brake system applications.

This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.

Aluminum Caps and Plugs for Fitting and Adapter Thread Protection

THREADED ALUMINUM DUST CAPS

Part Number	Fitting and Adapter Dash Size	Thread	Dimensions INCHES		Pkg. Of
			A	B	
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	1 1/16-12	.85	.76	10
FBM3653	-16	1 5/16-12	.86	.78	10



THREADED ALUMINUM DUST PLUGS

Part Number	Fitting and Adapter Dash Size	Thread	Dimensions INCHES			Pkg. Of
			A	B	C	
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	1 1/16-12	.65	1.38	.99	10
FBM3660	-16	1 5/16-12	.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.

SPECIFICATIONS

Packaged Part Number	I.D. INCHES	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



Firesleeve

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.

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 Nitrile ¹ Part No.	5-Piece Package EPR ² 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



*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.

²EPR (Ethylene Propylene Rubber) O-Rings to be used with Nitromethane and alcohol fuels.

Bulk or Retail Packaged Parts

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

ACCESSORIES

Aeroquip Performance Products Oil Cooler

- Provides excellent cooling with low pressure drop
- Provides cooling at low speeds
- Cooler can be mounted anywhere
- Can be adapted to other systems
- Improves aerodynamics of vehicle
- Reduces chance of fire
- Easy cleaning



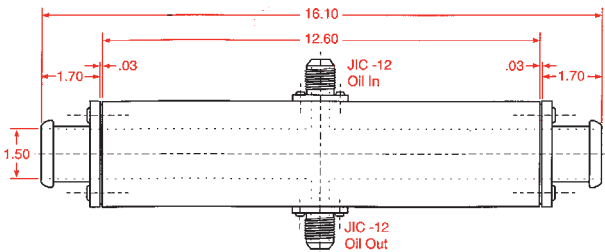
FBM2194 OIL COOLER

Bulk Part Number	Description
FBM2194	Oil cooler with threaded tube water attachment fitting

Approximate weight 2.7 lbs.

ACCESSORIES (ORDER SEPARATELY)

Bulk Part Number	Description
FBM2195	Oil cooler replacement kit (Includes cooler core, 2 O-Rings, gaskets and 8 screws)
FBM2198	Oil cooler seal replacement kit (Includes 2 gaskets and O-Rings to seal cooler)
FBM2199	Oil fitting replacement kit (Includes one JIC-12 oil connector and O-Ring)
FBM1108	End cap replacement kit (Includes end cap, O-Ring, gasket and screws)



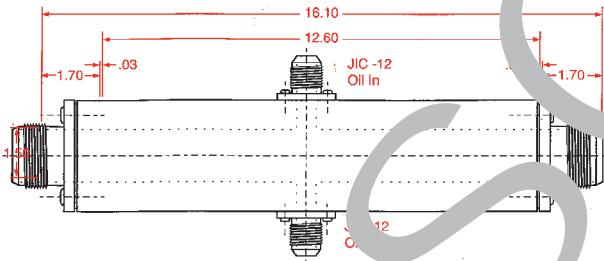
FBM2196 OIL COOLER

Bulk Part Number	Description
FBM2196	Oil cooler with JIC water attachment fitting (-16)

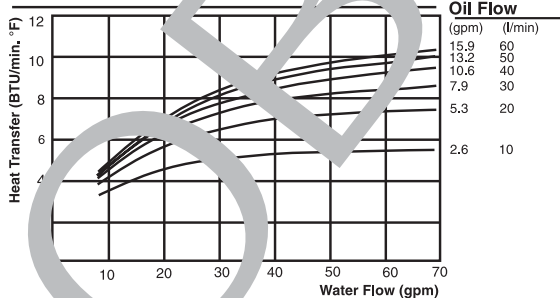
Approximate weight 2.9 lbs.

ACCESSORIES (ORDER SEPARATELY)

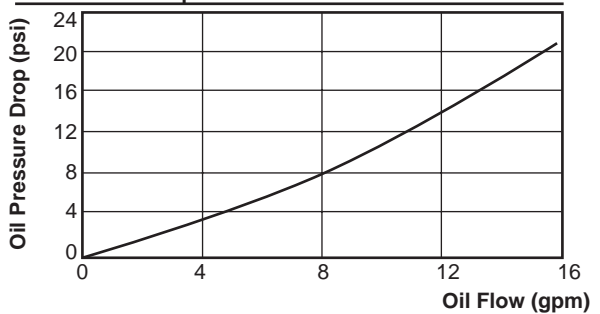
Bulk Part Number	Description
FBM2197	Oil cooler replacement kit (Includes cooler core, 2 O-Rings, gaskets and 8 screws)
FBM2198	Oil cooler seal replacement kit (Includes 2 gaskets and O-Rings to seal cooler)
FBM2199	Oil fitting replacement kit (Includes one JIC-12 oil connector and O-Ring)
FBM1109	End cap replacement kit (Includes end cap, O-Ring, gasket and screws)



Heat Transfer



Oil Pressure Drop



Performance example: Aeroquip Performance Products Oil Cooler
 Oil flow: 8 gpm
 Water flow: 50 gpm
 Oil temp. before oil cooler: +284°F (+140°C)
 Water temp. before oil cooler: +185°F (+85°C)
 Oil temp. after oil cooler: +256°F (+124°C)
 Water temp. after oil cooler: +187°F (+86°C)

Note: Maximum operating pressure for both oil and water is 150 psi.

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	FCM1001	.22	.44
-06	FCM1002	.34	.55
-08	FCM1003	.44	.65
-10	FCM1004	.56	.80
-12	FCM1005	.69	.94

Please see Page 41 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

Nominal I.D. INCHES	Hose O.D. Range INCHES	Overbraid I.D. INCHES
3/4	1/2 to 1	3/4
1-1/2	1-1/2 to 2-1/4	1-1/2

ORDERING INFORMATION

Bulk Part Number	Packaged Length Part Number				
	3 FEET	6 FEET	10 FEET	15 FEET	20 FEET
FBR1200	FCR1203	FCR1206	FCR1210	FCR1215	FCR1220
FBR2400	FCR2403	FCR2406	FCR2410	FCR2415	FCR2420

Please see Page 43 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.

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.

ASSEMBLY EQUIPMENT

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:

1. A unique patent-pending 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).
2. 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.



ProCrimp® 1380

The ProCrimp FT1380 is the industry's easiest and fastest means of assembling 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

- User friendly operation minimizes training and mistakes
- Electronic controls mean minimal maintenance
- Crimps Aeroquip Performance Products StartLite®, Teflon* and AQP® racing hose
- Preset crimp and simple die cage insertion to reduce setup time and errors
- Upright design for easy hose insertion
- Compact design requires little space
- Crimps -4 through -20



Cut-Off Tool

FT1258

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



Hand-Held Hose Cutter

Eaton's hand-held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as 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.

*Teflon is a DuPont trademark.

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 Aeroquip Performance Products anodized aluminum fittings for AQP® Racing Hose in sizes 6 through -20. Color coded by size.



Hose Assembly Lube

FBM3553

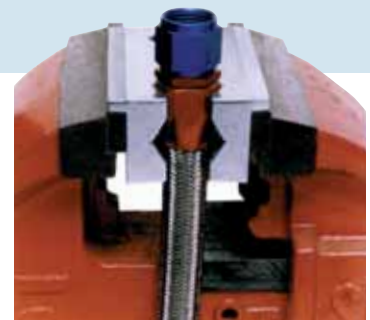
Aeroquip Performance Products Hose Assembly Lube is a specially compounded lubricant superior to any other lubricant used in hose assembly work. Available in pint containers. Use for either hand or machine assembly.



Vise-Jaw Inserts for Anodized Fitting Protection

FCM3661 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.



FCM3661 vise-jaw inserts also feature magnetic backs, allowing quick set-ups and easy transfer between vises.

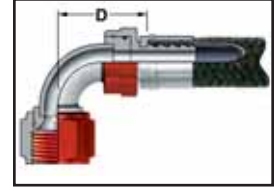
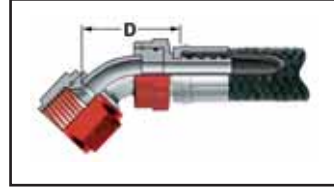
*Teflon is a DuPont trademark.

ASSEMBLY INSTRUCTIONS

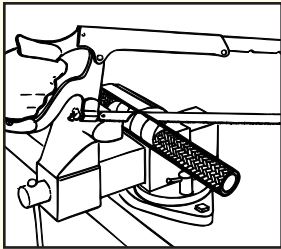
How To Determine Hose Assembly Lengths

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.

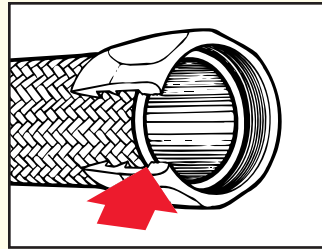
L = Overall Length
 J = Cut Length of Hose
 D = Fitting Length



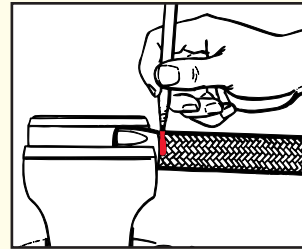
AQP® Racing Hose (with Reusable Fittings)



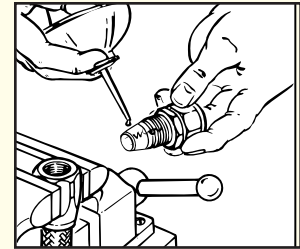
Step 1. Cut hose square to length with fine-tooth hack saw or cut-off wheel. To minimize wire braid flare out, wrap hose with masking tape and cut through tape. Remove tape before next step.



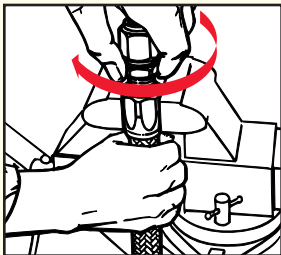
Step 2. Insert hose in socket with twisting, pushing motion until hose is in line with back of socket threads.



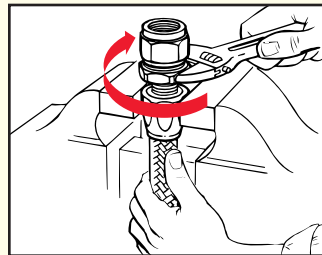
Step 3. Important—Mark position around hose at rear of socket with a grease pencil, paint or tape.



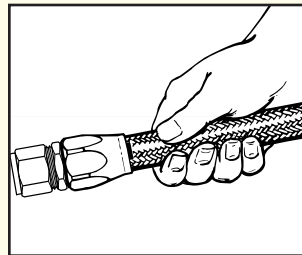
Step 4. Lubricate inside of hose and nipple threads liberally using S.A.E. 30 lubricating oil or Aeroquip FBM3553 Hose Assembly Lube.



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.



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 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 Aeroquip Performance Products equipment manual for calibration procedures.

PROCRIMP 1380 CRIMP MACHINE TARGET SETTINGS

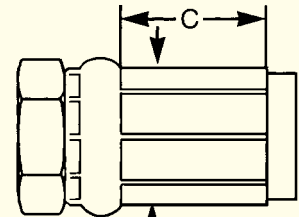
Hose Dash Size	Die Cage	Crimp Diameter (±.005 Inches)	Target Setting
-04	-M120	.493	088
-06	-M150	.614	078
-08	-M150	.719	187
-10	-M210	.896	142
-12	-M240	1.020	116
-16	-M280	1.205	155
-20	-M370	1.465	040

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 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.



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.

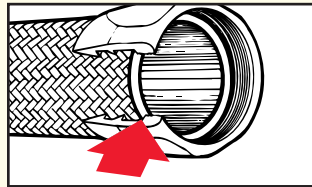
$$\frac{\text{Measurement 1} + \text{Measurement 2} + \text{Measurement 3} + \text{Measurement 4}}{4} = \text{Crimp Diameter}$$



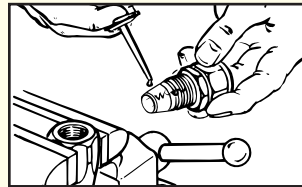
StartLite® Racing Hose (with Reusable Fittings)



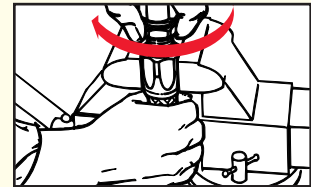
Step 1. Cut hose square to length with Aeroquip Performance Products Cut Off Tool (FT1258) or similar cutting device.



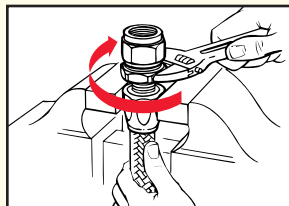
Step 2. Insert hose in socket with twisting, pushing motion until hose is in line with back of socket threads.



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.



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.



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.

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.

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.



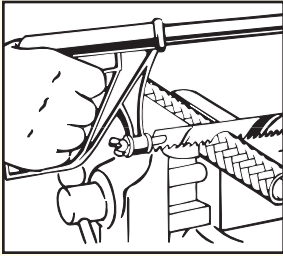
Use for either hand

StartLite® Hose Routing Procedure

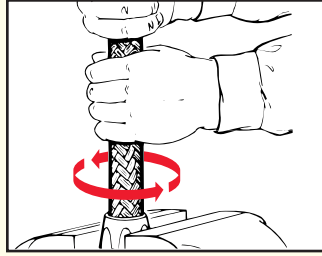
In most vibration applications, it may be necessary to restrain, protect, or guide the hose to protect it from damage caused by unnecessary flexing or contact with other mechanical components. Care must be taken to ensure such restraints do not introduce additional stress or wear points. StartLite® hose,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

ASSEMBLY INSTRUCTIONS

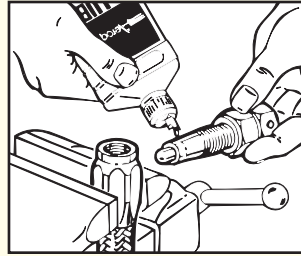
AQP® High Pressure Hose (Power Steering)



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



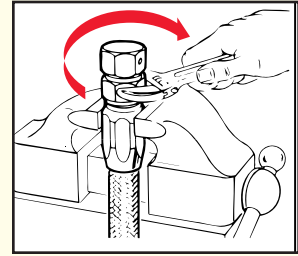
Step 2. Put socket in vise. Screw hose counterclockwise into socket until it bottoms. When assembling long lengths of hose, it may be preferred to put hose in vise just tight enough to prevent from turning, and screw socket onto the hose counterclockwise until it bottoms. Back off 1/4 turn.



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.



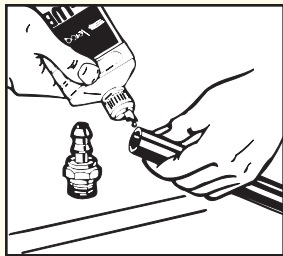
Step 4. Male Ends: Screw nipple clockwise into socket and hose. Leave a 1/32" clearance between nipple hex and socket.

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.

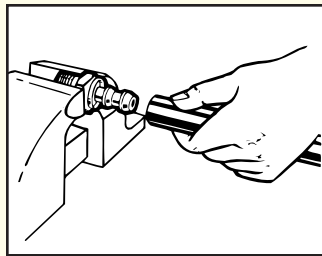
Note: It is recommended that all hose assemblies be proof pressure checked at twice the operating pressure using a proof test stand such as the Aeroquip Performance Products FT1058 stand.

To disassemble:
Reverse steps.

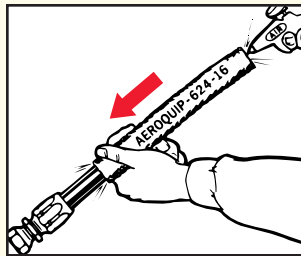
SOCKETLESS™ Hose¹



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

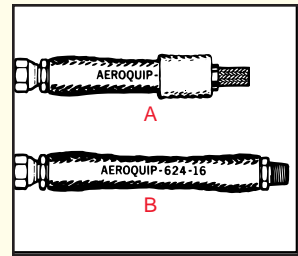


Step 2. Push hose on fitting until hose end bottoms underneath protective cap as shown. Clean, proof test to twice operating pressure and inspect all assemblies.



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.



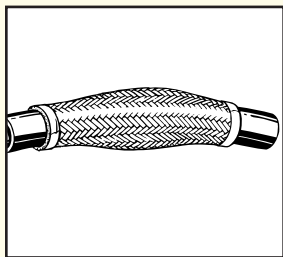
Step 2. Skin sleeve back from cut end of hose enough to allow assembly of second end fitting. (2A)

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

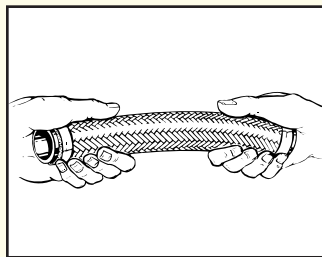
Step 3. Position nylon wire tie or band clamp over sleeve on each end of the hose assembly and draw tight.

¹Never use a hose clamp with FBV SOCKETLESS™

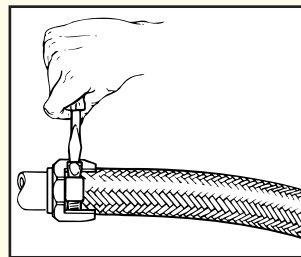
Overbraid



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

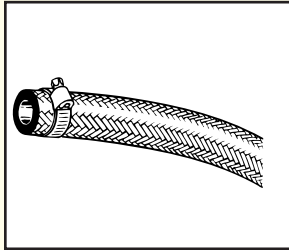


Step 2. Stretch until snug, mark length and cut with tin snips.

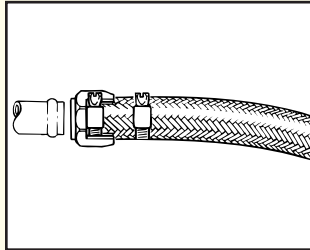


Step 3. Reconnect radiator hose and secure hose and overbraid with clamp or ProClamp clamp.

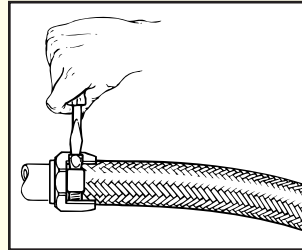
Pro Clamp™



Step 1. Slide clamp onto hose.

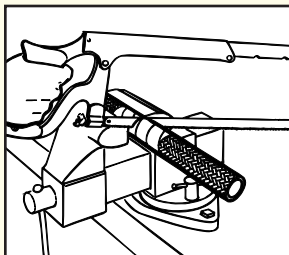


Step 2. Push cap (socket) onto hose until it bottoms. Then slide clamp under cap.



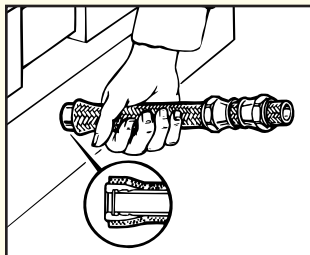
Step 3. Push assembly onto beaded tube. Position clamp for appearance. Tighten with a screwdriver.

Teflon* Racing Hose with Reusable Fitting

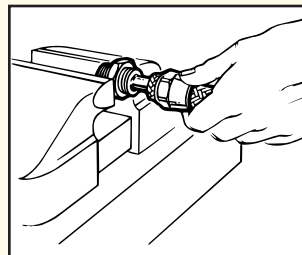


Step 1. Cut hose square to length with fine-tooth hack saw or cut-off wheel. To minimize wire braid flare out, wrap hose with masking tape and cut through tape. Remove tape, trim loose wires and flush with lube before next step. Burrs on bore of tube should be removed with a knife. Clean the hose bore.

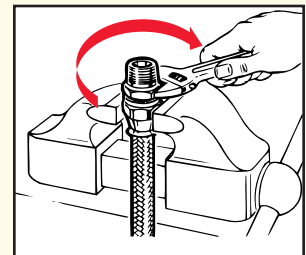
Sometimes wire braid hose will “neck down” on one end and “flare out” on the other end. This can be used to an advantage. Slip two sockets back to back over the “necked down” end of the hose, position approximately 3 inches from each end. Mount nipple hex in a vise. Work the hose bore over the nipple 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 thumb-nail is a convenient measuring device. Tighten further to align corners of nipple and socket hexes. CLEAN, PROOF TEST TOTWICE 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.

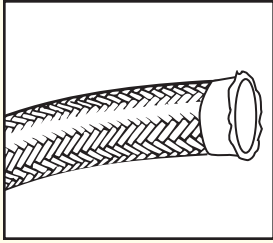
Important: Fittings may be disassembled and reused at least once. However, all such fittings should be carefully examined for distortion, thread damage and I.D. dimensions. New sleeve is recommended upon reuse of fitting.

Replacement brass sleeves are available. Refer to Page 19.

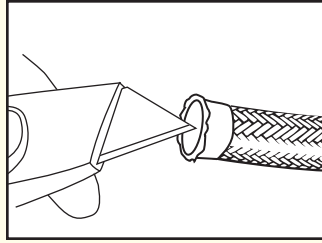
*Teflon is a DuPont trademark.

ASSEMBLY INSTRUCTIONS

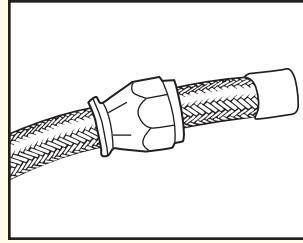
A/C Hose and Fittings



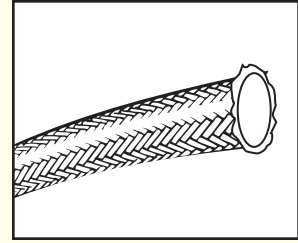
Step 1. Wrap a piece of tape around the hose twice and mark to the correct length for cutting. Using a cut-off saw with a knife blade or equivalent, cut the hose through the tape where marked. This must be a clean, straight cut, otherwise, hose assembly will be difficult.



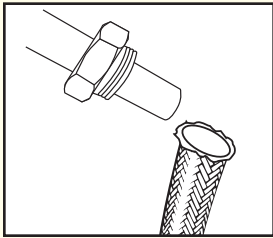
Step 2. Using a knife, remove any burrs or debris from the end of the hose. Clean the hose out thoroughly before assembling fittings.



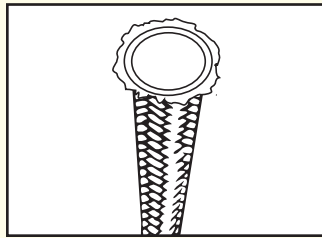
Step 3. Once the hose is cut and cleaned, insert the hose through the socket (the threads should be facing in the direction that the nipple will be inserted).



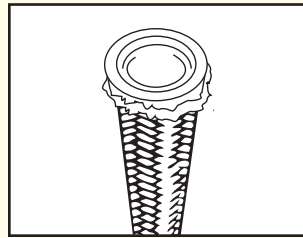
Step 4. With the socket slid on the hose, remove the tape. Be sure to remove all of the tape. Use a knife if necessary.



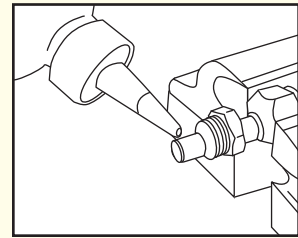
Step 5. Insert the FT1038A hose tool or fitting nipple gently into the end of the hose.



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.

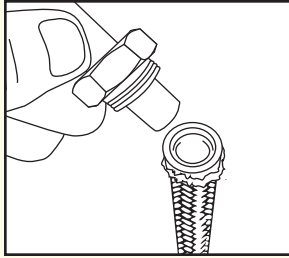


Step 7. Push the sleeve over the end of the blue tube and under the wire braid by hand. Complete positioning of the sleeve by pushing the hose end against a flat surface. Visually inspect to see that the tube stock butts against the o-ring on the inside of the sleeve. Be careful not to kink or damage the hose during this process. If the hose is damaged, a new piece must be cut and used.

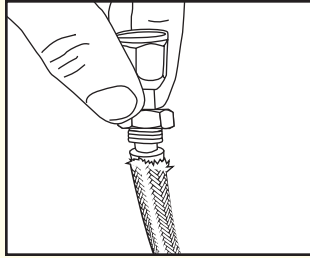


Step 8. Lubricate the nipple with refrigerant oil.

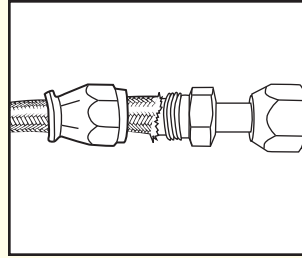
A/C Hose and Fittings (cont.)



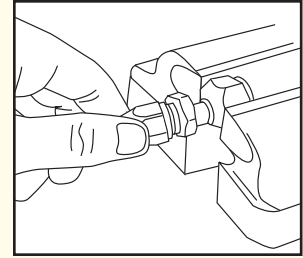
Step 9. Insert the lubricated nipple into the hose.



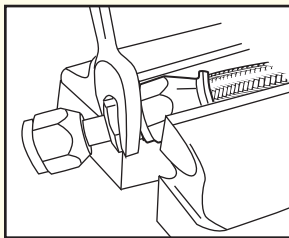
Step 10. Use a rotating motion until the nipple has bottomed out into the sleeve. Be very careful not to kink or crush the hose.



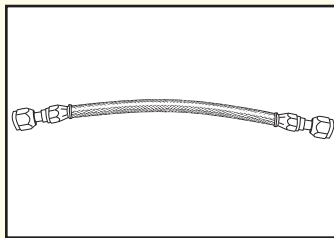
Step 11. With the nipple fully inserted, slide the socket back up the hose to the nipple threads.



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.



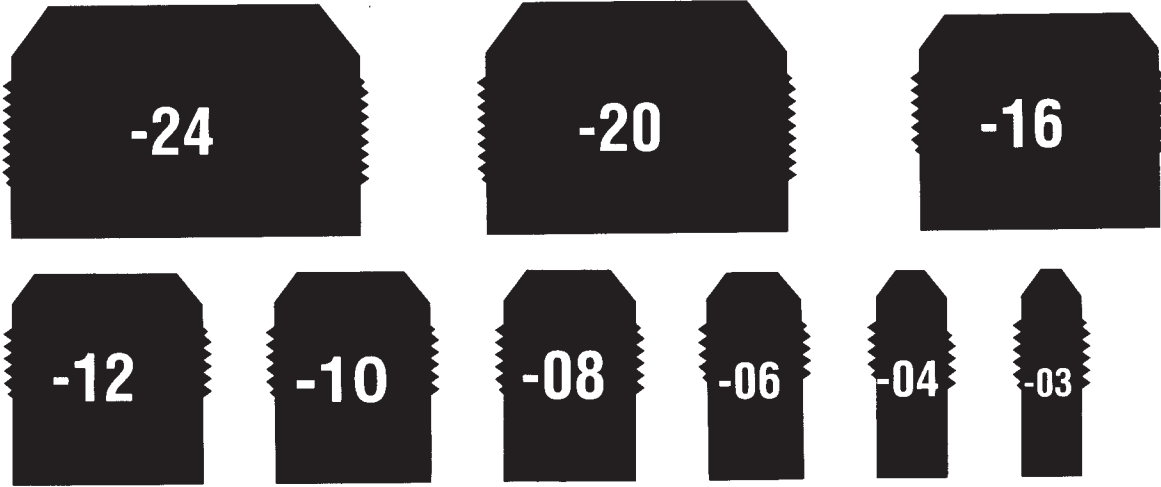
Step 14. Repeat Steps 2 thru 13 to complete the other end of hose assembly. Once assembled, remove any contaminants from the hose before installing it into the A/C system.



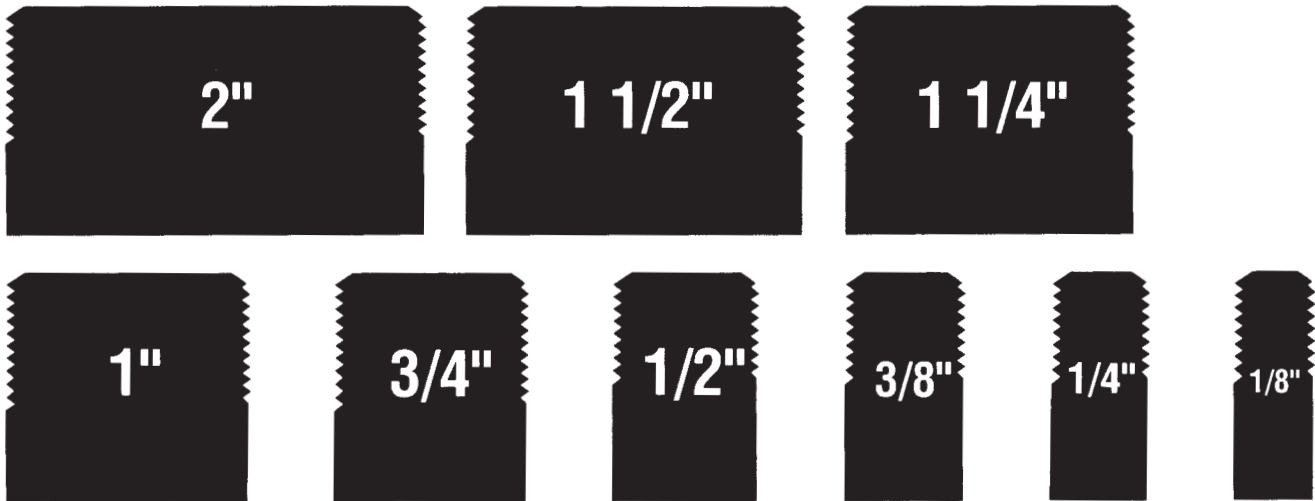
TECHNICAL DATA

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

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

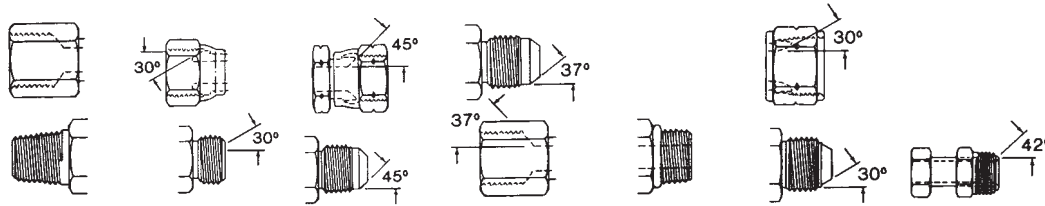
S.A.E. 37° (AN) Dash Size	Nominal Fractional Equivalent
	INCHES
-12	3/4
-14	7/8
-16	1
-20	1-1/4
-24	1-1/2
-32	2

This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.



Thread Size Chart

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

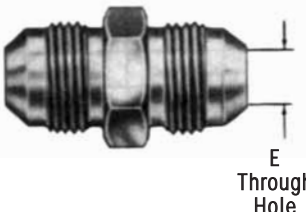


Dash Size	N.P.T.F.	N.P.S.M. Approximate Diameter	SAE 45° Automotive Refrigeration	SAE 37° AN	S.A.E. O-Ring Boss	P.T.T. 30° Automotive	S.A.E. Inverted Flare	Tubing O.D. Size
								INCHES
-02	1/8-27	1/8-27	5/16-24	5/16-24	5/16-24		5/16-24	1/8
-03			3/8-24	3/8-24	3/8-24		3/8-24	3/16
-04	1/4-18	1/4-18	7/16-20	7/16-20	7/16-20		7/16-24	1/4
-05			1/2-20	1/2-20	1/2-20		1/2-20	5/16
-06	3/8-18	3/8-18	5/8-18	9/16-18	9/16-18		5/8-18	3/8
-07			11/16-24				1-1/16-18	
-08	1/2-14	1/2-14	3/4-16	3/4-16	3/4-16		3/4-18	1/2
-10			7/8-14	7/8-14	7/8-14		7/8-18	5/8
-12	3/4-14	3/4-14	1-1/16-14	1-1/16-12	1-1/16-12		1-1/16-16	3/4
-14				1-3/16-12	1-3/16-12			
-16	1-11-1/2	1-11-1/2		1-5/16-12	1-5/16-12	1-5/16-14		1
-20	1-1/4-11-1/2	1-1/4-11-1/2		1-5/8-12	1-5/8-12	1-5/8-14		1-1/4
-24	1-1/2-11-1/2	1-1/2-11-1/2		1-7/8-12	1-7/8-12	1-7/8-14		1-1/2
-32	2-11-1/2	2-11-1/2		2-1/2-12	2-1/2-12	2-1/2-12		2

Through Hole Dimensions

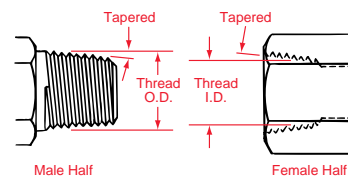
All dimensions are nominal. In jump size bodies, minimum through hole dimensions will correspond to the smallest dash size.

E THROUGH HOLE

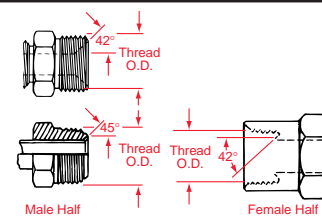
S.A.E. 37°	Dash Size	S.A.E. 37°
	-03	.12
	-04	.17
	-05	.23
	-06	.30
	-08	.39
	-10	.48
	-12	.61
	-16	.84
	-20	1.08
	-24	1.31
	-32	1.78

Common Thread Connections

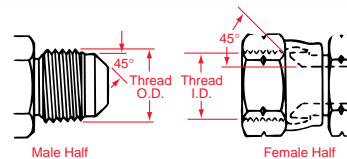
NPTF (NATIONAL PIPE TAPERED FUEL)



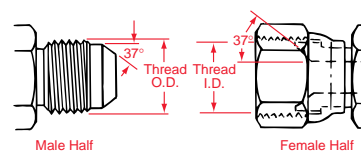
S.A.E. INVERTED FLARE



S.A.E. 45°



S.A.E. 37° (AN)



TECHNICAL DATA

Compression-Style Design Provides Simple, Troublefree Assembly

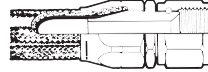
Aeroquip Performance Products anodized aluminum reusable fittings are engineered to match Eaton hose tolerances, providing matchless performance. The smooth tube design allows excellent fluid flow. Their compression-style design provides simple, troublefree assembly.

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.

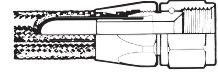
For applications involving methanol and nitromethane fuel mixtures, Aeroquip offers zinc-plated carbon steel fittings designed precisely for these situations. These fittings feature a steel nipple, nut and tube with an anodized aluminum hose socket. High quality aluminum carburetor adapters and banjo fittings are also available.

Eaton's Compression Style Design

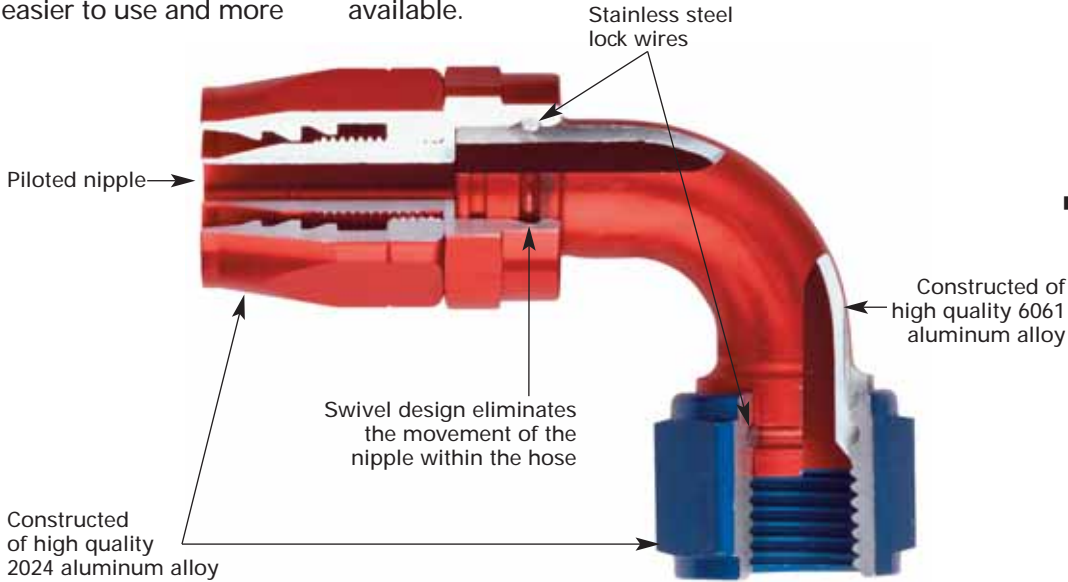


- Designed to be re-used without damage to the fitting
- Nipple pilot prevents damage to the inner tube
- More user friendly, for consistently excellent hose/fitting connections
- Nipple does not move with this design on swivel fittings

Competition's Cutter Style Design

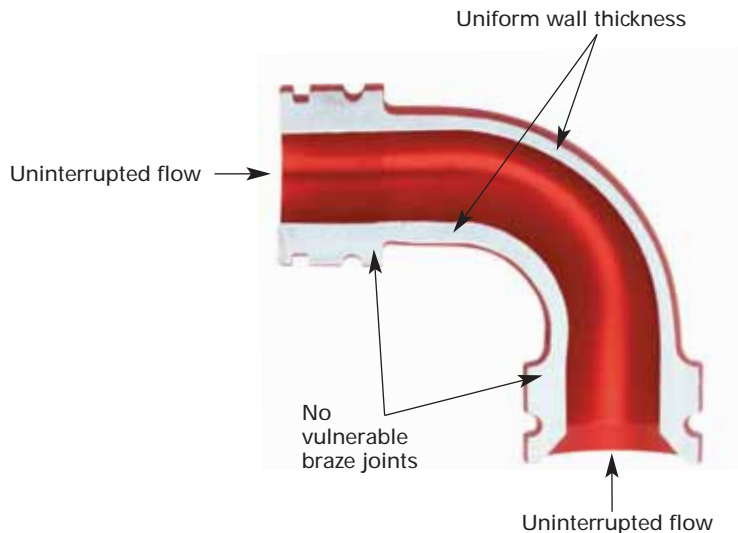


- Cutting edge dulls with each use, which can cause an incomplete connection.
- For re-use the inner tube must be removed from the lip seal area without damage to the cutter. A damaged or dull cutter can mean a leaky fitting.
- Excessive lube oil applied during installation can cause hydraulic lock in 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 (braze joints)
- Significantly improved appearance



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

This page is part of a complete catalog containing technical and safety data that must be reviewed when selecting a product.



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 Torque ¹	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.** See Bulletin JA14A for steel fittings.

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

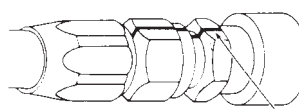
ALTERNATE TIGHTENING METHOD ONE

Flats Method

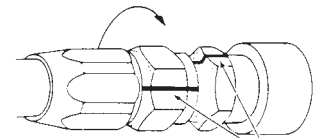
Here are the steps for an excellent method of tightening. Anyone can tell if the joint was tightened and how much.

Size	Number of Hex Flats Rotations
-04	1-1/2 to 1-3/4
-06	1 to 1-1/2
-08	1-1/4 to 1-3/4
-10	1-1/4 to 1-3/4
-12	1 to 1-1/2
-16	3/4 to 1
-20	1/2 to 3/4
-24	1/2 to 3/4

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.
3. Using a wrench, rotate the nut to tighten. Turn the nut the amount shown on the chart.



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

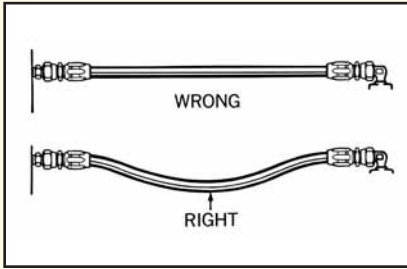
The second alternate method of tightening is very simple and easy to remember. Bring the nut to hand tight and then rotate a quarter of a turn. This applies to all sizes. Mark the fitting as indicated in the flat method to confirm the quarter turn.

CONVERTING UNITS OF MEASURE

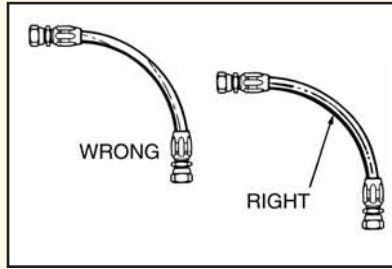
Multiply	By	To Obtain	Multiply	By	To Obtain
Atmospheres	14.70	Pounds/square inch	Liters	0.2642	Gallons
Atmospheres	1.013	Bars	Meters	3.281	Feet
Bars	0.9869	Atmospheres	Meters	39.37	Inches
Bars	14.50	Pounds/square inch	Microns	10 ⁻⁶	Meters
Centimeters	0.3937	Inches	Miles	5280	Feet
Feet	0.3048	Meters	Miles	1.609	Kilometers
Gallons	231	Cubic inches	Miles/hour	1.609	Kilometers/hour
Gallons	3.785	Liters	Miles/hour	0.8684	Knots
Gallons (Imperial)	1.20095	U.S. gallons	Ounces	0.0625	Pounds
Gallons (U.S.)	0.83267	Imperial gallons	Ounces	28.34952	Grams
Gallons (water)	8.3453	Pounds of water	Ounces (fluid)	1.805	Cubic inches
Gallons/feet/hour	8.0208	Cubic minute	Ounces (fluid)	0.02957	Liters
Horsepower	745.7	Watts	Pounds	453.5924	Grams
Inches of mercury	1.133	Feet of water	Pounds of water	0.1198	Gallons
Kilometers	0.6214	Miles	Pounds/square inch	0.06804	Atmospheres
Liters	0.03531	Cubic feet	Temp. (°C)	1.8	+32 Temp. (°F)
Liters	61.02	Cubic inches	Temp. (°F)	-325/9	Temp. (°C)

TECHNICAL DATA

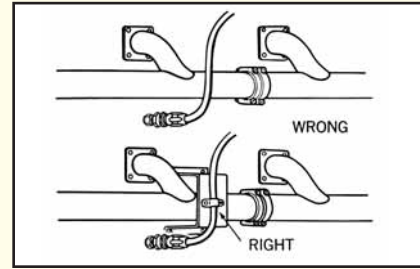
Hose Routing and Installation



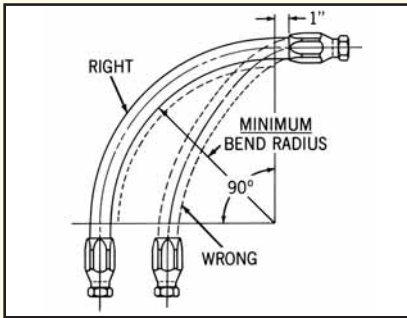
Under pressure, a hose may change in length. Always provide some slack in the hose to allow for this shortening or elongation. (However, excessive slack in hose lines may cause poor appearance.)



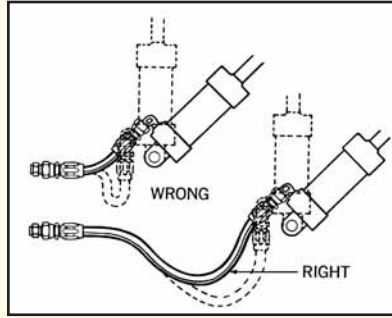
If a hose is installed with a twist in it, operating pressures tend to force it straight. This can loosen the fitting nut. Twisting can cause reinforcement separation, and the hose could burst at the point of strain.



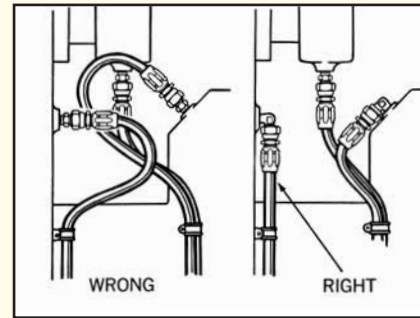
When hose lines pass near an exhaust manifold or other heat source, they should be insulated by a heat resistant boot, firesleeve or a metal baffle. In any application, brackets and clamps keep hose in place and reduce abrasion. For installations where abrasion to the hose cover cannot be prevented with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



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.



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 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.

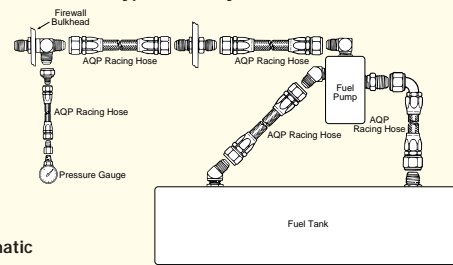


AQP® Racing Hose System Schematics

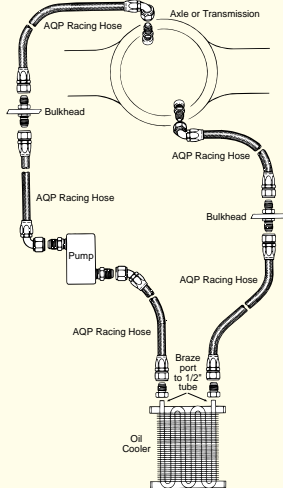
Typical Fuel System Connection Schematic



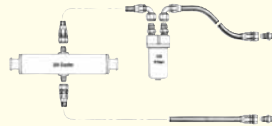
Typical Fuel System Schematic



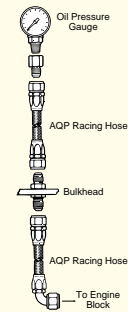
Typical Transmission or Axle Cooler Schematic



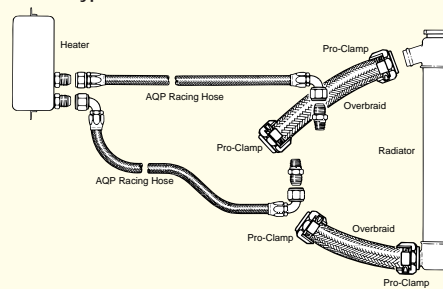
Typical Oil Cooler Schematic



Typical Pressure Gauge Schematic

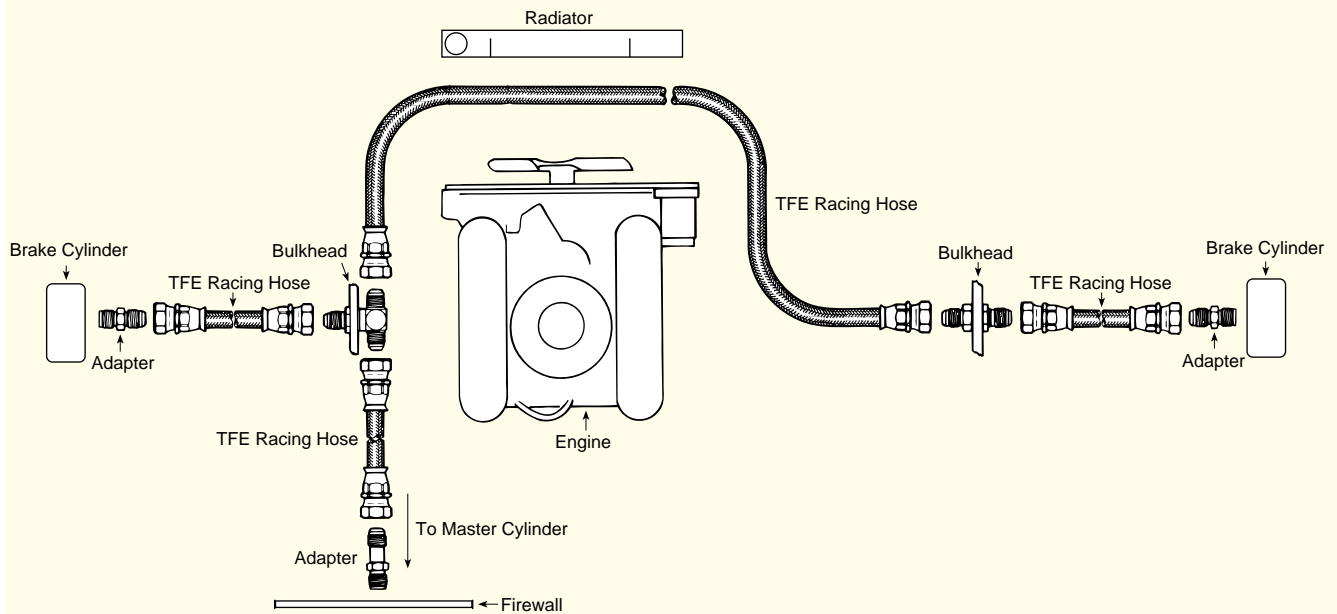


Typical Radiator and Heater Schematic



Teflon* Racing Hose System Schematics

Typical Brake System Connection Schematic



*Teflon is a trademark of DuPont.

TECHNICAL DATA

Flow Capacities of Hose Assemblies at Suggested Flow Velocities

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

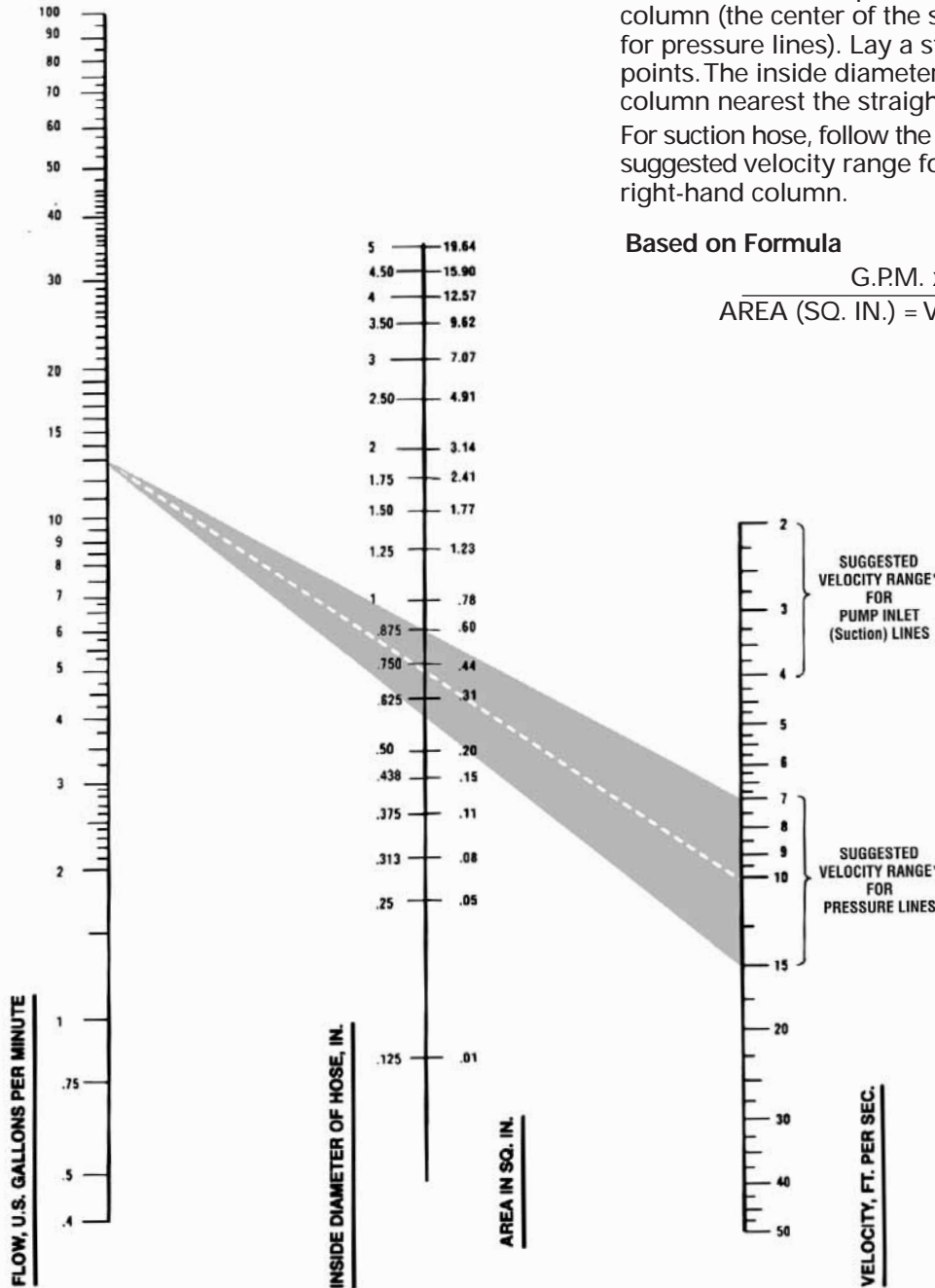
Example

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

$$\text{AREA (SQ. IN.)} = \frac{\text{G.P.M.} \times 0.3208}{\text{VELOCITY (FT./SEC.)}}$$

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 1.20095.
- 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

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.



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Bulk or Retail Packaged Parts

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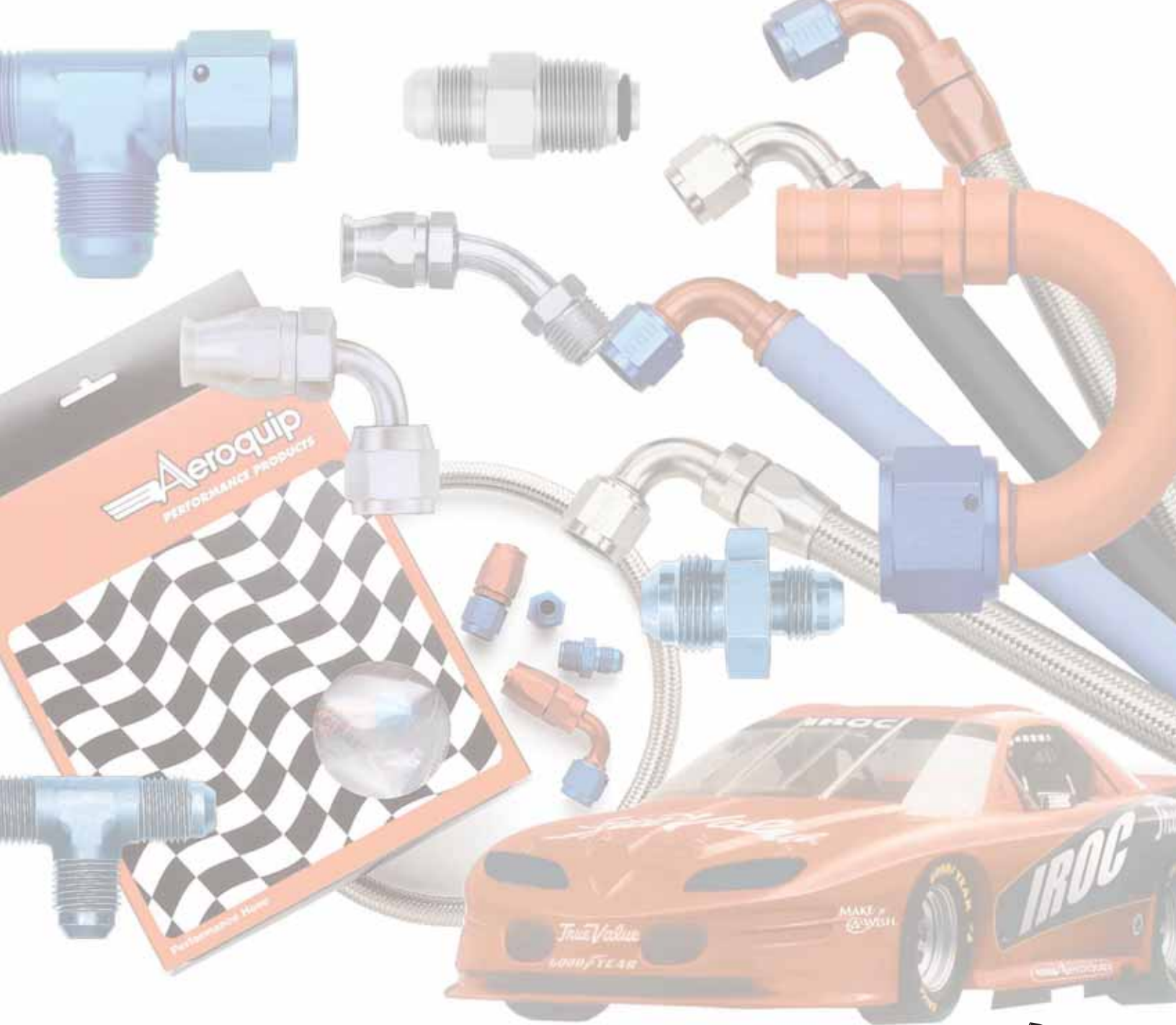
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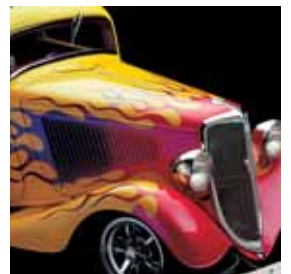
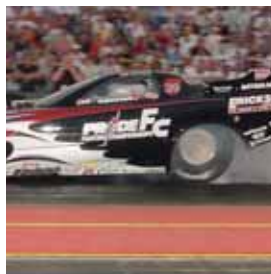
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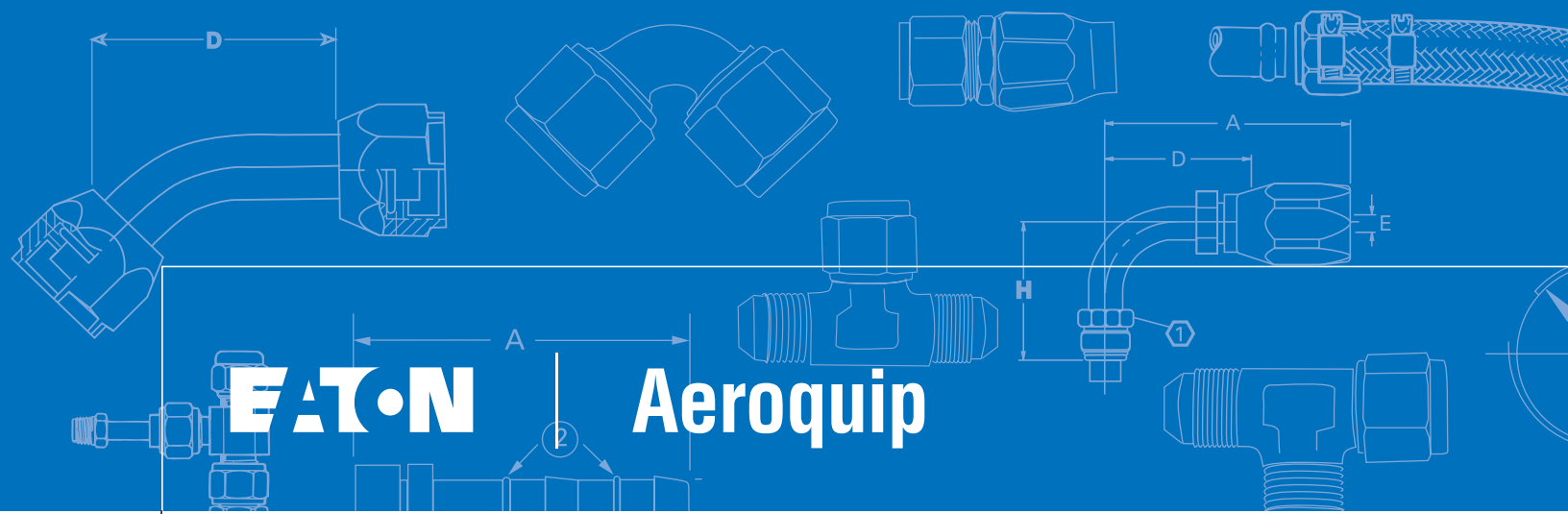
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*When it isn't just a question of being first...
but also being the best.*





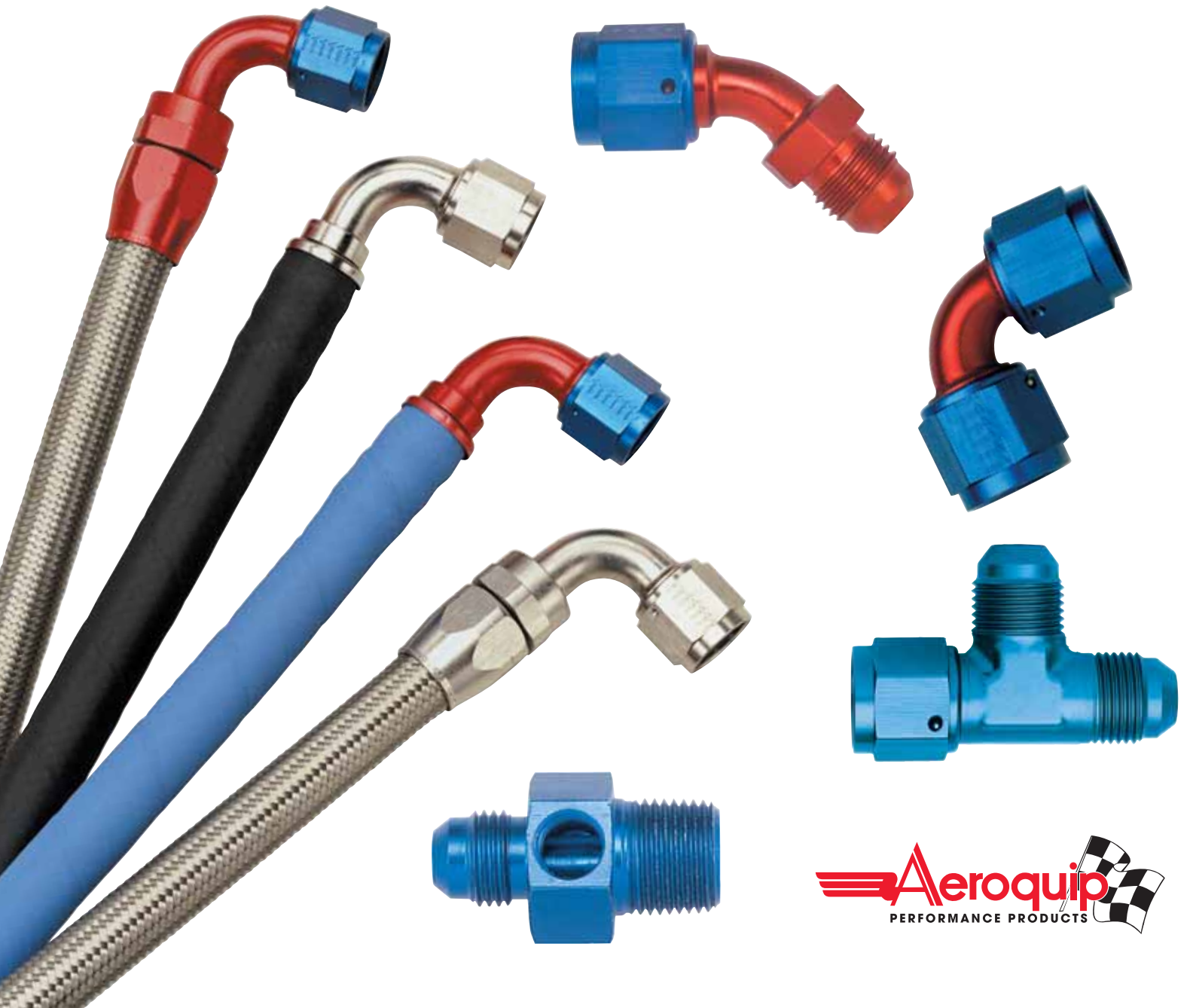
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Aeroquip

Aeroquip Performance Products

2005 New Product Supplement

To be used in conjunction with main products catalog A-SPPE-MC001-E2



Aeroquip
PERFORMANCE PRODUCTS

Direct Port Fittings

45° ORB FITTING

Reusable Aluminum Swivel O-Ring



Hose Size	Bulk Part Number	Thread Size
-08	FBM1348	9/16-18
-08	FBM1349	3/4-16
-10	FBM1350	11/16-12
-10	FBM1351	7/8-14
-12	FBM1352	7/8-14
-12	FBM1353	11/16-12

90° ORB FITTING

Reusable Aluminum Swivel O-Ring



Hose Size	Bulk Part Number	Thread Size
-08	FBM1355	9/16-18
-08	FBM1356	3/4-16
-10	FBM1357	11/16-12
-10	FBM1358	7/8-14
-12	FBM1359	7/8-14
-12	FBM1360	11/16-12

Adapters

90° MALE AN TO AN PRESSURE GAUGE ADAPTER



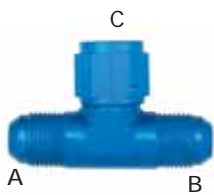
Blue Anodized Packaged Part Number	"A" Dash Size	"B" Dash Size	NPT Dash Port Size	
			INCHES	INCHES
FCM2272	-6	-6	1/8	
FCM2273	-8	-8	1/8	
FCM2274	-10	-10	1/8	

AN TO PIPE PRESSURE GAUGE ADAPTER



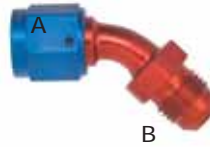
Aluminum Blue Anodized Packaged Part Number	"A" Dash Size	"B" Pipe Size	NPT Port Size	
			INCHES	INCHES
FCM2276	-6	1/4	1/8	
FCM2277	-6	3/8	1/8	
FCM2278	-8	1/4	1/8	
FCM2279	-8	3/8	1/8	

TEE WITH FEMALE ON THE BOTTOM



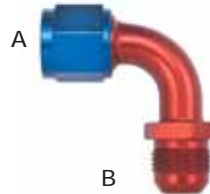
Aluminum Blue Anodized Packaged Part Number	"A" Dash Size	"B" Dash Size	"C" Dash Size
FCM2281	-4	-4	-4
FCM2282	-6	-6	-6
FCM2283	-8	-8	-8
FCM2284	-10	-10	-10
FCM2285	-12	-12	-12
FCM2286	-16	-16	-16

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

90° MALE AN TO FEMALE SWIVEL FLARE



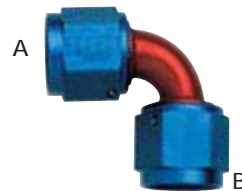
Aluminum Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM3155	-6	-6
FCM3156	-8	-8
FCM3157	-10	-10
FCM3158	-12	-12

45° FEMALE FLARE SWIVEL



Aluminum Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2971	-06	-06
FCM2972	-08	-08
FCM2973	-10	-10
FCM2974	-12	-12

90° FEMALE FLARE SWIVEL



Aluminum Packaged Part Number	"A" Dash Size	"B" Dash Size
FCM2978	-06	-06
FCM2979	-08	-08
FCM2980	-10	-10
FCM2981	-12	-12

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.



Racing Hose on Reels



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 a patented* 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

Hose Dash Size	Hose I.D.	Hose O.D.	Max. Operating Pressure	Min. Bend Radius	Weight Per Foot	Vacuum Service	Reel Part Number
	INCHES	INCHES	PSI	INCHES	POUNDS	INCHES/HG	On a Reel
-04	.22	.44	1000/750 ¹	2.00	.11	21	FBA0400RL Order in 500 Ft Increments
-06	.34	.55	1000/750 ¹	2.50	.16	21	FBA0600RL Order in 400 Ft Increments
-08	.44	.65	1000/750 ¹	3.50	.17	21	FBA0800RL Order in 300 Ft Increments
-10	.56	.80	1000/750 ¹	4.00	.21	28	FBA1000RL Order in 180 Ft Increments
-12	.69	.94	1000/750 ¹	4.50	.29	28	FBA1200RL Order in 180 Ft Increments
-16	.88	1.15	750/750 ¹	5.50	.38	28	FBA1600RL Order in 60 Ft Increments

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 of A-SPPE-MC001-E2 for banjo fitting for fuel systems.

Please see Pages 41-46 of Document A-SPPE-MC001-E2 for assembly instructions.

¹ Rating for use with lightweight crimp fittings.

* Patent Number 4,366,746

AQP® SOCKETLESS™ Hose on Reels



Quick and easy assembly that can save you time.

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

Hose Dash Size	Hose I.D.	Hose O.D.	Max. Operating Pressure	Min. Bend Radius	Weight Per Foot	Vacuum Service	Reel Part Number
	INCHES	INCHES	PSI	INCHES	POUNDS	INCHES/HG	On a Reel
-06	.38	.62	250	3.00	.12	28	FBV0600RL Order in 560 Ft Increments
-08	.50	.75	250	5.00	.15	28	FBV0800RL Order in 600 Ft Increments

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).

* Only available in blue



ET1000 - Portable Crimp Machine

Eaton is proud to add the ET1000 crimp machine to its line of portable crimp machines. While being our most economical crimp machine to-date, the new Performance ET1000 machine boasts a broad crimp capability with an ease-of-use that is sure to please hose assemblers.

This new crimp machine has been approved to crimp:

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

The new ET1000 crimp machine 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 new crimp machine may be ordered separately or with one of four power supplies: hand-pump, air/hydraulic pump, 12-volt DC power unit, or a 110-volt AC power unit (see Ordering Instructions on the reverse side).



Features

- Pusher slides out of position.
- Compatible with the Aeroquip Performance Product hose & fitting line.
- Can be mounted on service vehicles due to its portable design.
- Can be powered with virtually any 10,000 psi hydraulic power source.
- Utilizes 2-piece collet assemblies.
- Spacer rings control the crimp diameter.

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.

SPECIFICATIONS

Dimensions	22" high, 16" wide, 14" in depth
Weight	70 lbs. (without pump)

ET1000 CRIMP MACHINE PART NUMBERS

ET1000-001	No pump, no tooling (basic machine only)
ET1000-002	Hand-pump, no tooling
ET1000-003	Air-hydraulic pump, no tooling
ET1000-004	110 volt 1/2HP electric pump, no tooling
ET1000-005	12 V DC pump, no tooling

* All part numbers above include the base crimp machine.

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 Teflon Racing Hoses (sizes -3, -4 and -6), straight fitting.

ET1000-011	No pump, but includes complete Collet and Spacer Ring Tooling package described above.
ET1000-012	2-Stage Hand pump, and complete Collet and Spacer Ring Tooling package described above.
ET1000-013	Air/Hydraulic pump, and complete Collet and Spacer Ring Tooling package described above.
ET1000-014	110 Volt Electric pump, and complete Collet and Spacer Ring Tooling package described above.
ET1000-015	12 Volt DC pump, and complete Collet and Spacer Ring Tooling package described above.

HOSE STYLE	HOSE END	COLLET ASSEMBLY	SPACER RING P/N	FLAT SIDE (UP/DOWN)	CRIMP DIAMETER RANGE (IN)	DIE RING ADAPTER REQUIRED
FBA0400	FW1390	T-400-2C	ET1010SR-M305A	FSU	0.488 0.498	Yes
FBU0400	FW1390	T-400-2C	ET1010SR-M305A	FSU	0.488 0.498	Yes
FBA0600	FW1390	ET1000DC-M150S	ET1010SR-M100A	FSU	0.609 0.619	Yes
FBU0600	FW1390	ET1000DC-M150S	ET1010SR-M100A	FSU	0.609 0.619	Yes
FBA0800	FW1390	T-400-3C	ET1010SR-M055A	FSU	0.715 0.725	Yes
FBU0800	FW1390	T-400-3C	ET1010SR-M055A	FSU	0.715 0.725	Yes
FBA1000	FW1390	ET1000DC-M195S	ET1010SR-M395D	FSU	0.891 0.901	Yes
FBU1000	FW1390	ET1000DC-M195S	ET1010SR-M395D	FSU	0.891 0.901	Yes
FBA1200	FW1390	ET1000DC-M230S	ET1010SR-M395D	FSU	1.015 1.025	Yes
FBU1200	FW1390	ET1000DC-M230S	ET1010SR-M395D	FSU	1.015 1.025	Yes
FBA1600	FW1390	T-400-5C	ET1010SR-M240D	FSU	1.200 1.210	Yes
FBU1600	FW1390	T-400-5C	ET1010SR-M240D	FSU	1.200 1.210	Yes
FBU2000	FC1817	T-400-6C	ET1010SR-M115D	FSU	1.460 1.470	Yes
FBC0300	FC3596	ET1000DC-M065S	ET1010SR-M205A	FSU	0.272 0.278	Yes
FBC0400	FC3596	ET1000DC-M065S	ET1010SR-M115D	FSU	0.334 0.340	Yes
FBC0600	FC3443	T-400-120C	ET1010SR-M055A	FSU	0.464 0.470	Yes

COLLET PART NUMBERS

T-400-2C	T-400-5C
T-400-3C	T-400-6C
T-400-120C	
ET1000DC-M065S	ET1000DC-M195S
ET1000DC-M150S	ET1000DC-M230S
ET1000AR-001(Die Ring Adapter)	

SPACER RING PART NUMBERS

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

PUMP PART NUMBERS*

ET1000PK-001	2-stage hand pump
ET1000PK-002	Air/hydraulic pump
ET1000PK-003	110 volt electric pump
ET1000PK-004	12 volt DC pump

* These pump kits include the pump, connecting hose assembly, and all of the adapters necessary to connect to the ET1000 crimp machine cylinder.

ACCESSORY PART NUMBERS

140-06701	1.5 oz. Tube, high efficiency PTFE grease
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LOCATOR KIT

ET1000LK-001	includes the knob, jam nut, a 3" set screw and a 4" set screw.
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Plan-O-Grams

Traditional Performance Products #FF13333

This 2' x 4' 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 #	Description	Qty.
FCM1012	-6 Strt Reus Fting	2
FCM4022	-6 45° Reus Fting	2
FCM4032	-6 90° Reus Fting	2
FCM4042	-6 120° Reus Fting	2
FCM2002	Strt -4 AN to 1/4 Pipe	2
FCM2005	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 -6AN to 7/8-20	2
FCM2111	Fuel -6 to 1/2-20 Inv. Flare	2
FCM2052	Flare Union -6AN/-6AN	2
FCM3749	Allen Plug 1/2" Pipe	2
FCM1013	-8 Strt Reus Fting	2
FCM4023	-8 45° Reus Fting	2
FCM4033	-8 90° Reus Fting	2
FCM2007	Strt -8 AN to -3/8 Pipe	2
FCM2037	-8 AN to -3/8 Pipe	2

Part #	Description	Qty.
FCM2110	Carb -8 AN to 7/8-20	2
FCM1014	-10 Strt Reus Fting	2
FCM4024	-10 45° Reus Fting	2
FCM4034	-10 90° Reus Fting	2
FCM2009	Strt -10 AN to -1/2 Pipe	2
FCM2039	90° -10 AN to -1/2 Pipe	2
FCM1015	-12 Strt Reus Fting	2
FCM4025	-12 45° Reus Fting	2
FCM4035	-12 90° Reus Fting	2
FCM2010	Strt -12 AN to -1/2 Pipe	2
FCM2017	90° -12 AN to -1/2 Pipe	2
FCM3671	Tube Nut -6	2
FCM3675	Tube Sleeve -6	2
FCM3676	Tube Nut -8	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



A/C Hose and Fitting #FF13565

Get the hottest new system to stay cool with the new 2' x 2' A/C Hose and Fitting Plan-O-Gram. This kit includes the stainless steel braided nylon hose and fittings, specifically designed for aftermarket A/C applications, along with the supporting marketing material you need to get you on the fast-track of selling this hot new product. Take the guesswork out of selecting the correct mix of the highest performing, fastest selling A/C hose and fittings.

Part #FF13365

- "Aeroquip Performance Products Sold Here" cling-on window decal
- Header card for Plan-O-Gram
- Aeroquip Performance Product's 2' x 5' banner
- 35 Reorder tags

Inventory

Part #	Description	Qty.
FCE1712	-6 Strt Reus Fting	2
FCE1713	-8 Strt Reus Fting	2
FCE1714	-10 Strt Reus Fting	2
FCE1722	-6 45° Reus Fting	2
FCE1723	-8 45° Reus Fting	2
FCE1724	-10 45° Reus Fting	2
FCE1732	-6 90° Reus Fting	2
FCE1733	-8 90° Reus Fting	2
FCE1734	-10 90° Reus Fting	2
FCM3416	-6 Refrigerant O-Rings	2
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



Storage Cabinets

These cabinets are the ideal way to organize your inventory of Aeroquip hose ends and adapters. Stock it any way you want to fit your particular needs. These heavily constructed steel units can be used for field service, or as a jobber display and stock cabinet.

FT1601 – 15 Drawer Storage Cabinet



Dimensions:

Size: 30-1/4" Wide x 13-5/8" High x 14-3/8" Deep

Weight: 45 lbs.

FT1600 – 16 Drawer Storage Cabinet



Dimensions:

Size: 16-1/8" Wide x 11-3/4" High x 9" Deep

Weight: 13 lbs.

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Printed in USA
Document No. A-SPPE-MC001-E2
Supercedes A-SPPE-MC001-E
May 2006