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.

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 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.

**FBM3553 Hose Assembly Lube**

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**How To Determine Hose Assembly Lengths**

This section provides instructions on how to calculate the "J" length of an AQP® Racing Hose with reusable fittings. The "J" length is determined by subtracting the "D" dimension (fitting length) from the "L" length (overall length) of the hose. Consult the fitting information tables for the "D" dimensions.

**AQP® Racing Hose (with Reusable Fittings) Diagram**

- **Step 1**: Cut the hose square to length using a fine-tooth hack saw or cut-off wheel. Wrap the hose with masking tape and cut through the tape. Remove the tape before proceeding.
- **Step 2**: Insert the hose in the socket with twisting and pushing motions to align it with the back of the socket threads.
- **Step 3**: Mark the position around the hose at the rear of the socket with a grease pencil, paint, or tape. This is an important step to ensure proper assembly.
- **Step 4**: Lubricate both the inside of the hose and the nipple threads with S.A.E. 30 lubricating oil or Aeroquip FBM3553 Hose Assembly Lube for optimal performance.
- **Step 5**: Carefully insert the nipple and engage the nipple and socket threads while holding the hose in position with one hand and using the other to ensure the hose does not push out of the socket. Use your thumbnail as a convenient measuring device to check for a gap of .031 inches.
- **Step 6**: Complete the assembly using a wrench while maintaining the hose's position. A maximum allowable gap of .031 inches should be observed. This step is crucial for accurate and secure assembly.
- **Step 7**: Check the assembled hose for pushout by observing the position mark made in Step 3. Pushout should not be evident. Perform a clean, proof test at twice the operating pressure and inspect all assemblies. Disassemble in reverse order for proper maintenance.

**Aeroquip Hose Assembly Lube**

Aeroquip Hose Assembly Lube is a specially compounded lubricant designed for superior performance in hose assembly work. It is available in pint containers and can be used for either hand or machine assembly. This lubricant is superior to any other lubricant used in hose assembly, ensuring reliable and efficient operation.
**StartLite® 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 crimp machines are provided to aid in establishing actual settings. The settings on this chart give crimp diameters close to, or at, specified values. The machine operator must check to verify the actual diameter. Before using these target settings, the machine must be within proper calibration. If needed, consult your Aeroquip equipment manual for calibration procedures.

<table>
<thead>
<tr>
<th>Hose Dash Size</th>
<th>Die Cage</th>
<th>Crimp Diameter (.005 Inches)</th>
<th>Target Setting</th>
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</thead>
<tbody>
<tr>
<td>-04</td>
<td>-M120</td>
<td>.493</td>
<td>088</td>
</tr>
<tr>
<td>-06</td>
<td>-M150</td>
<td>.614</td>
<td>078</td>
</tr>
<tr>
<td>-08</td>
<td>-M150</td>
<td>.719</td>
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</tr>
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<td>1.205</td>
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<tr>
<td>-20</td>
<td>-M370</td>
<td>1.465</td>
<td>040</td>
</tr>
</tbody>
</table>

**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.

Measurement 1 + Measurement 2 + Measurement 3 + Measurement 4 = Crimp Diameter

**Notes:**
- Greater resistance can be expected as compared to Aeroquip’s 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 FT1058 stand.

**StartLite® Racing Hose** (with Reusable Fittings)

**Step 1.** Cut hose square to length with Aeroquip 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 FBM3553 Hose Assembly Lube.

**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’s 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 FT1058 stand.

**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.
### 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.

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

**Swivel Ends:**
- Tighten nipple and nut on assembly tool.
- Lubricate nipple, mandrel and inside of hose liberally with Aeroquip assembly lube.

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

**Step 4.** Male Ends: Screw nipple clockwise into socket and hose. Leave a 1/32” to 1/16” clearance between nut and socket. Clean, proof test to twice operating pressure and inspect all assemblies.

**To disassemble:** Reverse steps.

**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 FT1058 stand.

### SOCKETLESS™ Hose

**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.

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

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

**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.

### Firesleeve

**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.

### 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.

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**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 INSTRUCTIONS

**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.

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**Teflon® Racing Hose**

- **Step 1.** Cut hose squarely.

*Teflon is a DuPont trademark.*