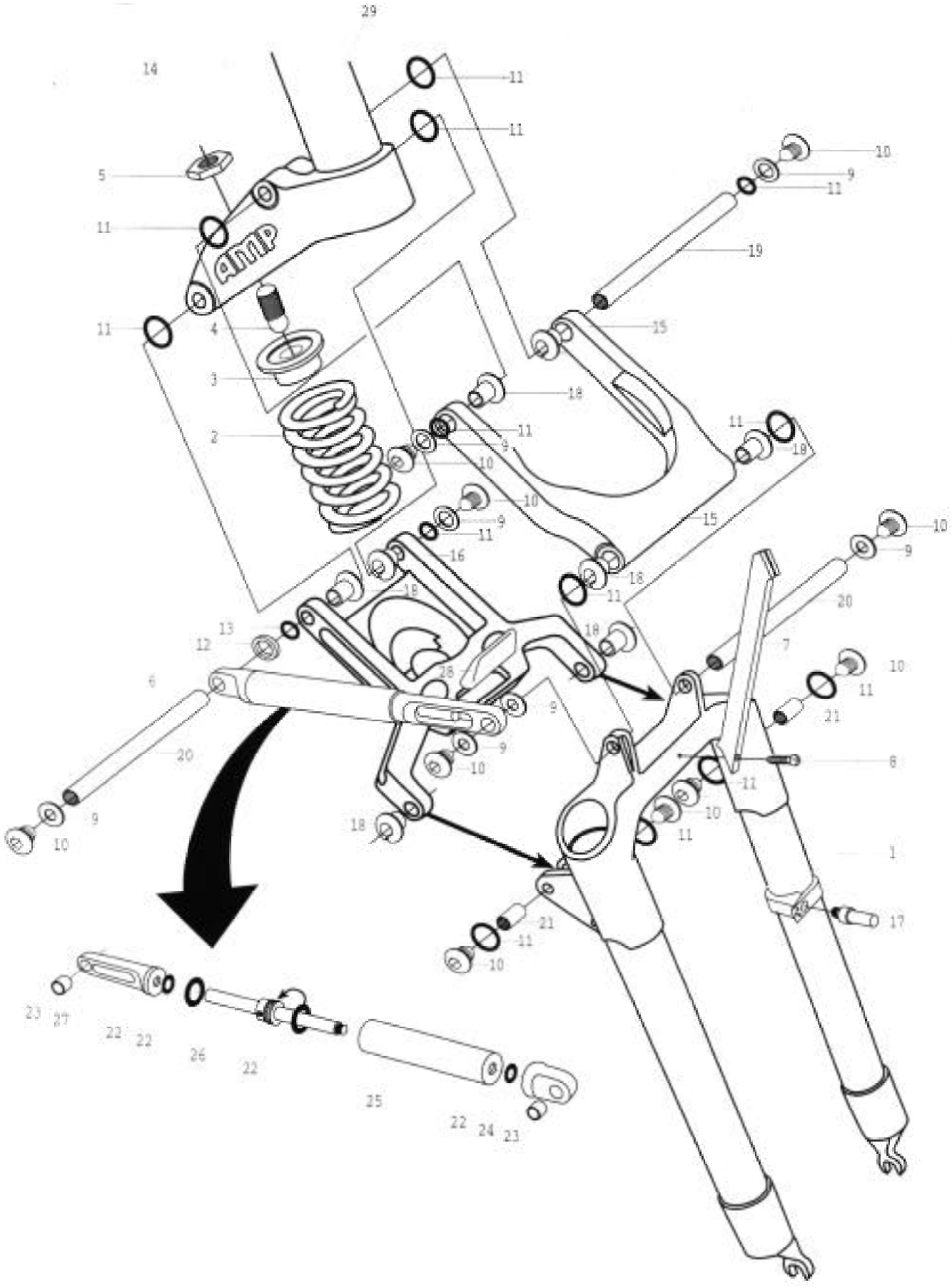
AMP RESEARCH

AMP Research Suspension Fork

Owner's & Service Manual

F3XC
F4BLT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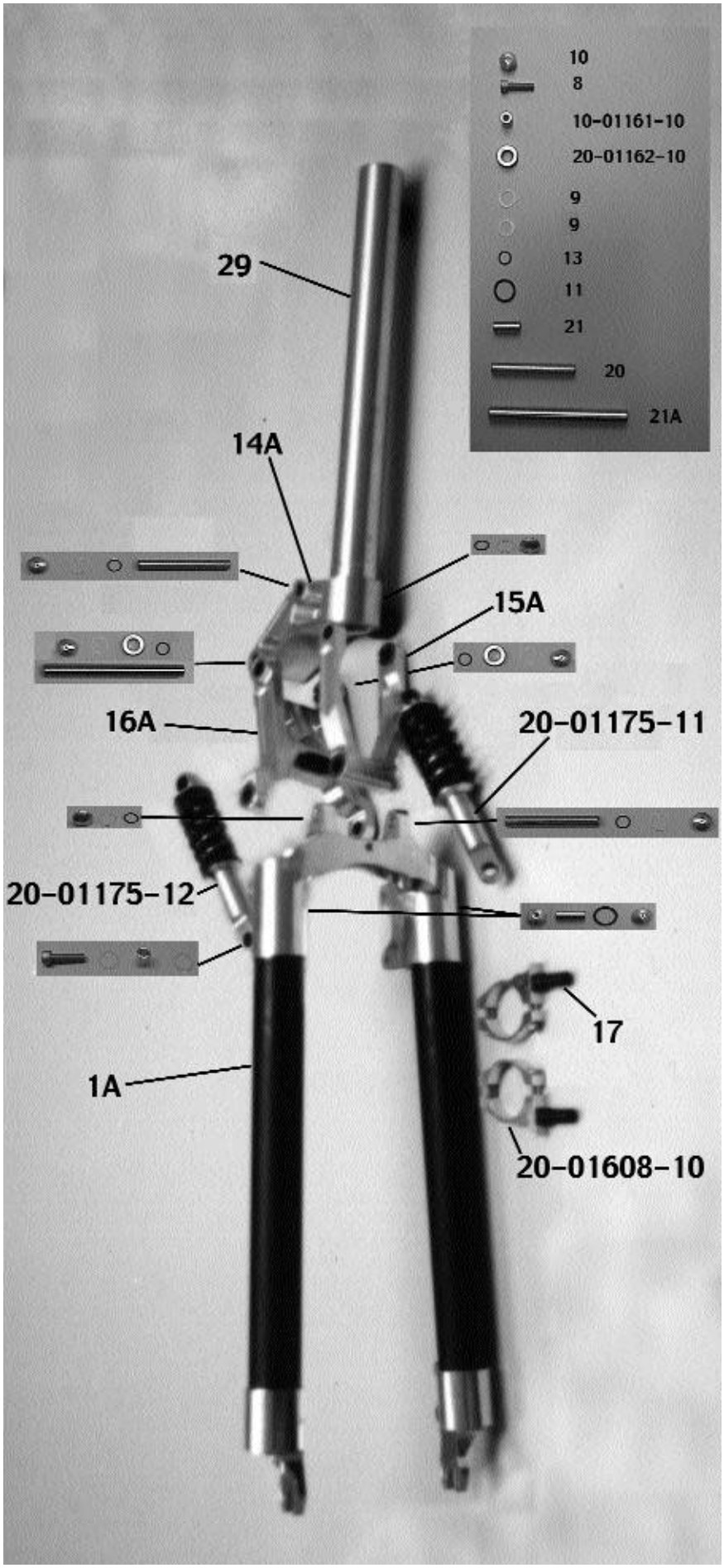
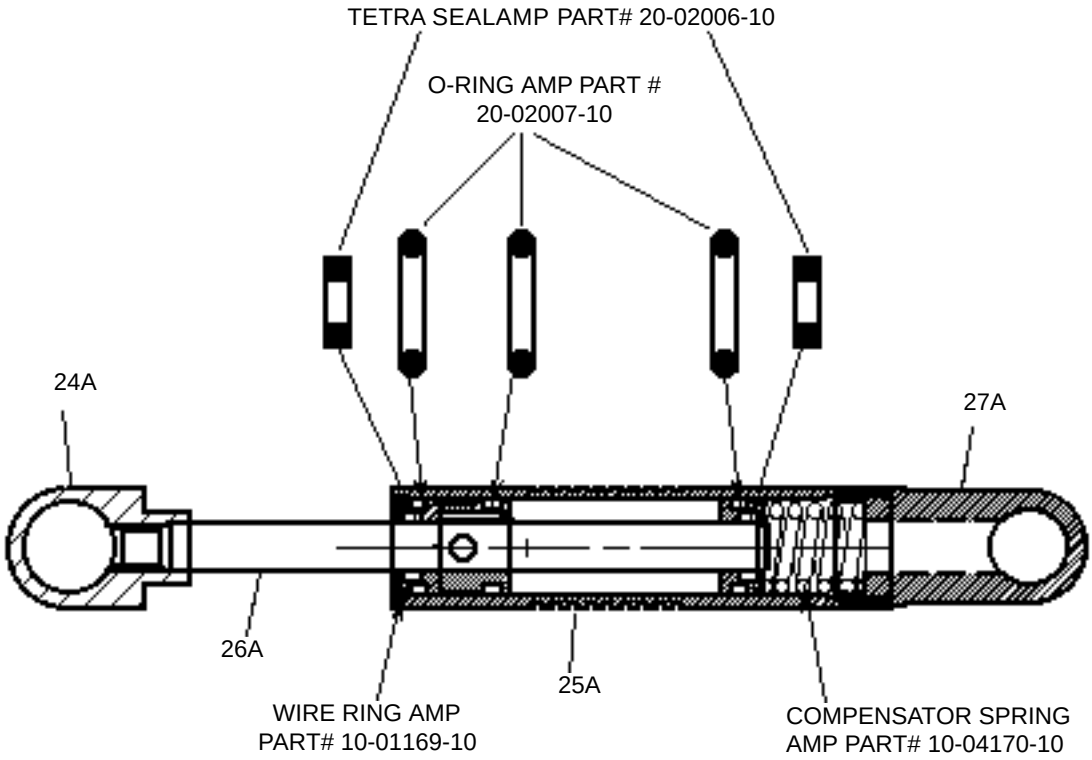
F4 EXPLODED VIEW



F4 BLT SHOCK ASSEMBLY



PARTS LIST

PICTURE NUMBER	PART NAME	PART NUMBER
	Pin & Bushing Kit F3	10-04141-10
	Pin & Bushing Kit F4	10-04144-10
	O-Ring Kit F3 Shock	10-04140-10
	O-Ring Kit F4 Shock (per shock)	10-04143-10
1	F3 Forkblade Assy - Canti & Disc *	10-05235-10
	F3 Forkblade Assy - Disc *	10-05236-10
	F4 Forkblade Assy - Canti & Disc *	10-05634-10
1A	F4 Forkblade Assy - Disc *	10-05633-10
2	F3 Spring - 1060# - Standard	10-01060-10
	F3 Spring - 850# - Optional	10-00850-10
	F3 Spring - 1200# - Optional	10-01200-10
	F4 Spring - 350# - Standard (on shock)	10-01138-10
	F4 Spring - 400# - Standard (on shock)	10-01142-10
	F4 Spring - 450# - Optional (on shock)	10-01626-10
3	Preload Collar	20-00665-10
4	Preload Screw	10-00613-10
5	Nut for Pre-Load Screw	10-02003-10
6	F3 Shock (complete Assy)	10-00747-10
7	Cablehanger	10-01106-10
8	Socket Cap Screw	10-02021-10
9	Nylon Washer (included in P & B Kits)	
10	Cap Screws	10-01175-10
11	O-Ring (included in P & B Kits)	
12	Shock Spacer	10-00676-10
13	O-Ring	10-02112-10
14	F3 Steerclamp - 1 1/8"	10-01149-10
	F3 Steerclamp - 1"	10-1149A-10
14A	F4 Steerclamp - 1 1/8"	10-01134-10
	F4 Steerclamp - 1"	10-01180-10
15	F3 Upper Swingarm	10-01151-10
15A	F4 Upper Swingarm	10-01135-10
16	F3 Lower Swingarm	10-01150-10
16A	F4 Lower Swingarm	10-01132-10
17	Canti Brake Boss	10-00653-10
18	Du Bearing (included in P & B Kits)	20-02001-10
19	Bearing Shaft (included in P & B Kits)	30-01197-10
20	Bearing Shaft (included in P & B Kits)	30-01196-10
21	Bearing Shaft (included in P & B Kits)	30-01195-10
21A	Bearing Shaft (included in P & B Kits) F4 Only	30-01140-10
24	F3 Shock Eyelet Assy	10-00640-10
24A	F4 Shock Eyelet Assy	10-01139-10
25	F3 Shock Housing Assy	10-00632-10
25A	F4 Shock Housing Assy	10-01141-10
26	F3 Shock Shaft & Piston Assy	10-02034-10
26A	F4 Shock Shaft & Piston Assy	10-04402-10
27	F3 Shock Endcap Assy	10-00633-10
27A	F4 Shock Endcap Assy	10-01629-10
29	Steertubes (call for specific sizes)	

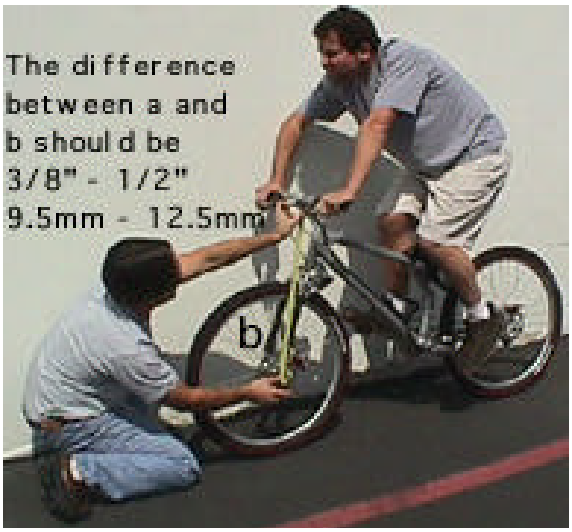
I. INTRODUCTION

WARNING! Special tools and knowledge are required to install this fork. Incorrect installation could create a dangerous riding condition which may result in serious injury. It is strongly recommended that you have your suspension fork installed by a qualified, professional bicycle mechanic.

II. INSTALLATION AND SETUP

A. INSTALLATION

1. Remove the front wheel. Remove the fork from the bike, and remove the headset and bearing race from the old fork. Before permanently installing the crown race, check for adequate clearance between the down tube and the fork crown. If additional clearance is necessary, use the washers (supplied with the fork) underneath the crown race, making sure that the crown race is seated firmly.



2. Install the fork assembly on the bike, and adjust the head set until no play or drag is detected.

3. For disc brake installation see Disc Brake Owner's Manual.

4. IMPORTANT! With the front wheel in the fork there should be 7/16" (11mm) of clearance between the top of the tire and the bottom of the fork crown. If a tire is used that does not maintain this distance, there is the possibility of the tire hitting the linkage under full compression.

B. SETUP

1. Suspension sag has been set at the factory. However, after the first ride it is advisable to check sag. Measure the distance from the bottom of the handlebar to the front axle with no weight on the bike (distance (a) on figure). Sit in your normal riding position and have someone take a measurement of the same points (distance (b) in figure). The difference between these two measurements (a and b) should be between 3/8" and 1/2".

2. To adjust spring preload on the F3XC loosen the jam nut under the linkage assembly and tighten or loosen the preload screw. Tighten jam nut after correct sag is set.

3. Optional spring rates are available directly from AMP Research or through your authorized AMP Research dealer. The spring provided will work well for most riders between 104lbs. and 190lbs.

III. MAINTENANCE

No regular maintenance is required. All bearings are maintenance free. Constant riding in mud and muddy sand may reduce bearing life. It is important to keep pivot points clean by rinsing with water. Do not use any type of lubricant on bearings after rinsing off your fork . Lubricants will attract dirt and carry it into the pivot points where it will act as an abrasive. If the bearings need to be changed, bearings and pins must be changed simultaneously. See your authorized AMP Research Dealer or contact AMP Research for replacement.

If a squeaking noise becomes noticeable, turn your bike upside down and squirt water on the preload collar and preload screw. This should eliminate the noise. You may lube the preload collar and preload screw contact area using a high-quality motorcycle chain lube.

A. CHANGING THE SPRING (F3XC)

TOOLS REQUIRED

*4mm Allen Wrench
*13mm Wrench
*Flat Screw Driver

1. Remove shock from fork by removing Allen screws and nylon washers (Parts 9, 10) and sliding shock from shafts (Part 20).

2. Extend fork and remove spring (Part 2).

3. Put some high-quality grease on the preload collar (Part 3) where it contacts the ball end of the preload adjuster (Part 4).

4. Make sure spring (Part 2) is seated properly and compress fork to hold spring in place.

5. Mount shock back on fork (Part 9, 10, 20).

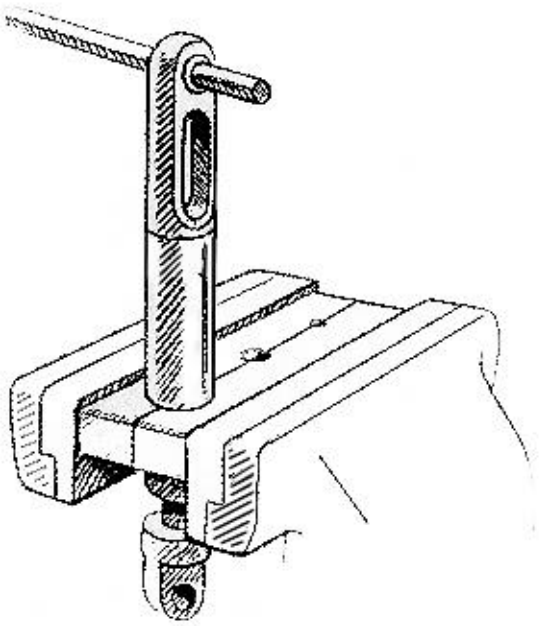
6. Re-set spring preload as described in Section II - B.

NOTE: Always use Loctite 242 on the Allen screws and never over tighten screws. Slightly more than hand tight is plenty.

B. CHANGING SHOCK OIL AND SEALS (F3XC)

TOOLS REQUIRED

* Vice
* 4mm Allen Wrench
* 5/16" x 3" Pin (a 5/16" or 8mm bolt will work)
* Shock Clamp Tool (#10-00760-10)
* Automatic Transmission Fluid (Dexron or Mercon) or Finishline Shock Oil (5, 7.5 or 10 weight)



1. Remove shock from fork by removing cap screws and nylon washers and sliding shock from shafts.

2. Clamp shock housing (#25) in center hole of Shock Clamp Tool (#10-00760-10). Unscrewend cap (#27) using a 5/16" x 3" pin.

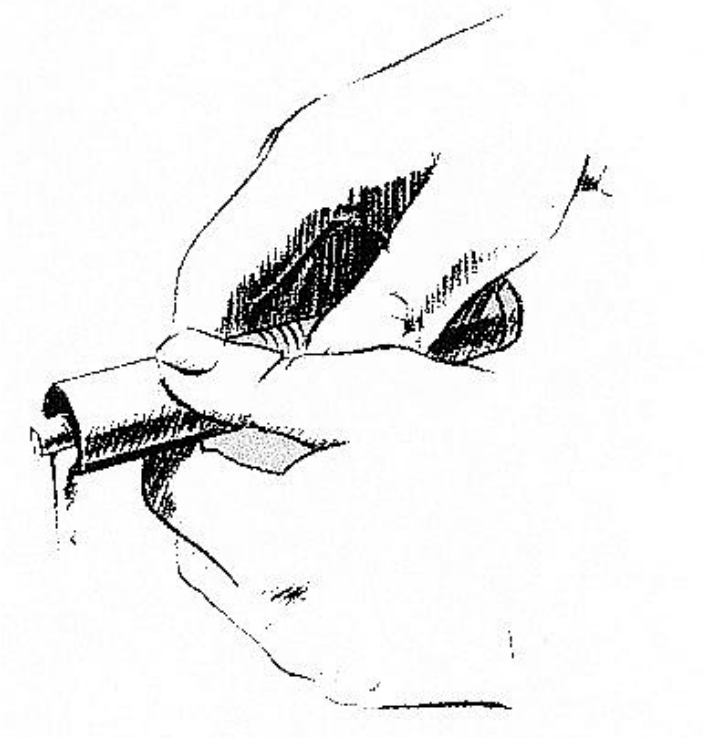
3. Remove shock housing from tool and drain oil. Clean the inside of the shock housing by refilling with Automatic Transmission Fluid or Finishline Shock Oil, and pushing the shaft in and out several times. Drain oil again. Repeat process until inside of shock is clean.

CAUTION: Do not use solvent as it will damage the seals.

4. Pull out shaft and piston (#26)and allow oil to drain. Remove O-ring from the piston and Tetra seals from the shock housing and end cap using a dull scribe needle (a straightened paper clip works well). Clean parts and install new O-ring and seals.

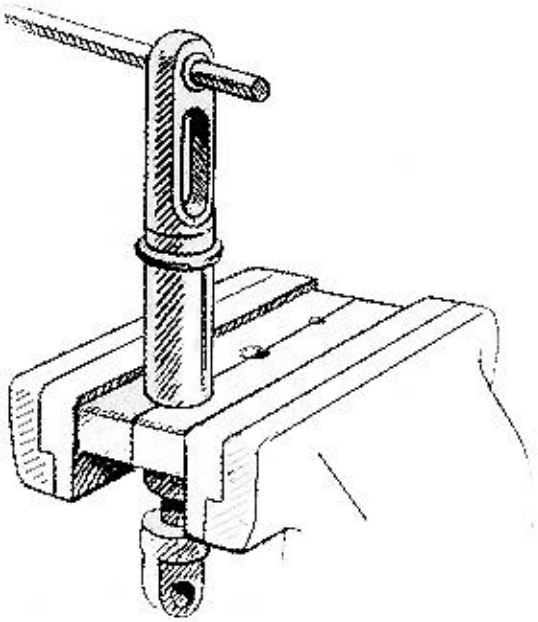
NOTE: O-ring and seals should be soaked in oil before installing. Be sure the Tetra seals in the shock housing and end cap are fully seated by sliding shaft through holes.

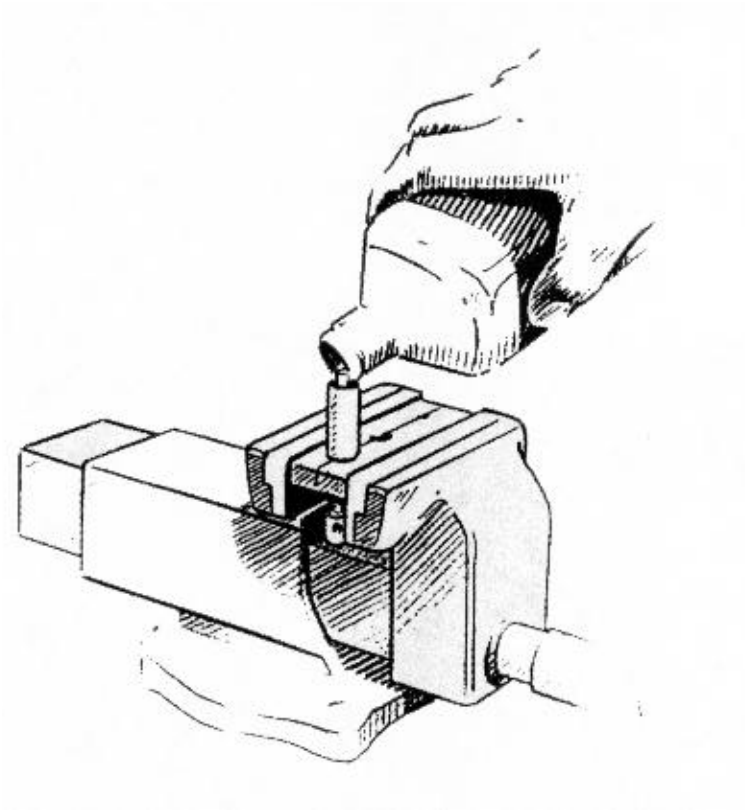
5. Slide shaft and piston into housing. Clamp shaft in tool and reinstall shock eyelet.



6. Turn shock over and lightly clamp shock housing in tool. Fill with Automatic Transmission Fluid o Finishline Shock oil. Very slowly push shock up and down to eliminate any trapped air. Add oil necessary.

7. Screw end cap onto housing. Slide new O-ring for end cap over the end cap and onto the shock housing.





Slowly tighten the end cap letting excess fluid escape. Loosen end cap partially so that the O-ring groove is exposed. Slide the O-ring up the shock housing until it snaps into place on the end cap. Re-tighten end cap.

CAUTION: Do not over tighten end cap. Use light pressure (slightly more than finger tight).
NOTE: If the end cap does not close completely, loosen and re-tighten several times to let out excess fluid.

C. CHANGING THE SPRING (F4BLT)

TOOLS REQUIRED

*4mm Allen wrench
*10mm wrench

1. Remove shock from fork by removing allen screws and nylon washers and sliding shock from shafts.
2. Loosen preload adjuster and remove spring retainer.
3. Remove spring and replace with new one.
4. Make sure spring is seated properly on preload adjuster and install spring retainer.
5. Mount shock back on fork.
6. Re-set spring preload as described in Section II,B.

NOTE: Always use Loctite 242 on the Allen screws and never over tighten screws. Slightly more than hand tight is plenty.

D. CHANGING SHOCK OIL & SHOCK SEALS (F4BLT)

TOOLS REQUIRED

* 4mm Allen wrench, 10mm wrench, 5/16" x 3" Pin (a 5/16" or 8mm bolt will work)
* Vise, Shock Clamp Tool (#10-00760-10), Oil level setting tools F4 (#10-01718-10,#10-01719-10)
* Seal kit (#10-04143-10)
* Automatic Transmission Fluid (Dexron or Mercon) or Finishline Shock Oil (5, 7.5 or 10 weight)

1. Place wire ring in groove.

2. Push lower seal holder into place against wire ring.

3. Cover hole in seal holder with finger and fill shock body with oil.

4. Slide shaft with piston slowly down through oil until shaft bottoms on lower seal holder.

   * Note: Keep hole in lower seal holder covered with finger until shaft starts to protrude through. This will prevent most of the oil from draining out.

5. a .Refill shock body with oil.

   b. Using appropriate oil level setting tool, push lower seal holder up until setting tool contacts shock body.

   * Note: Do not push up on shaft. Push only on lower seal holder with oil level setting tool.

6. Push upper seal holder into place on shaft.

7. Use seal holder setting tool to make sure upper seal holder is fully seated in oil.

   * Note: Be careful not to damage outer O-ring on threads in shock body.

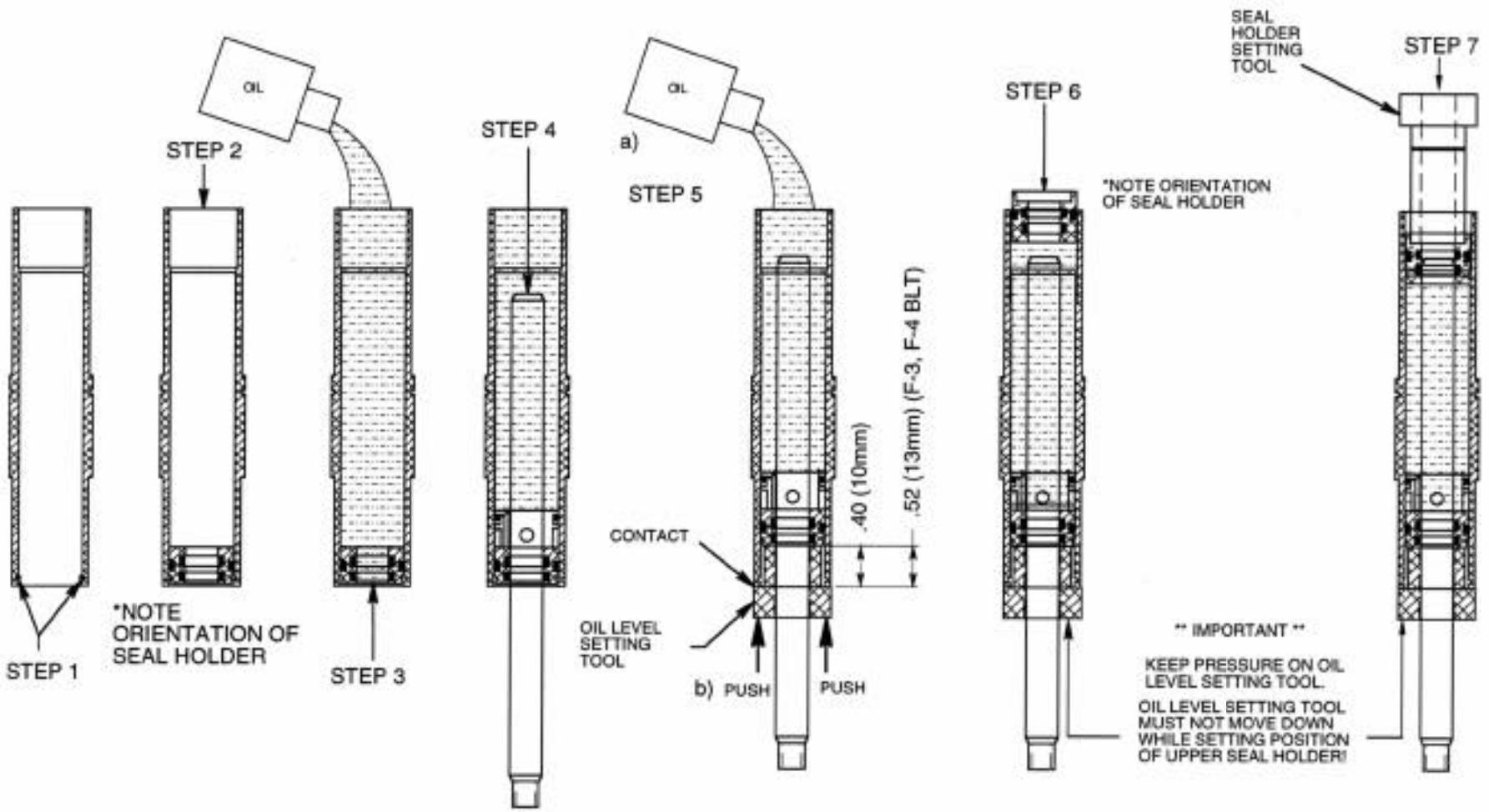
8. Use seal holder setting tool to push entire assembly down until lower seal holder stops on wire ring.

9. Make sure groove in seal holder setting tool is even with top of shock body after setting upper seal holder.

10. Place compensator spring in shock housing.

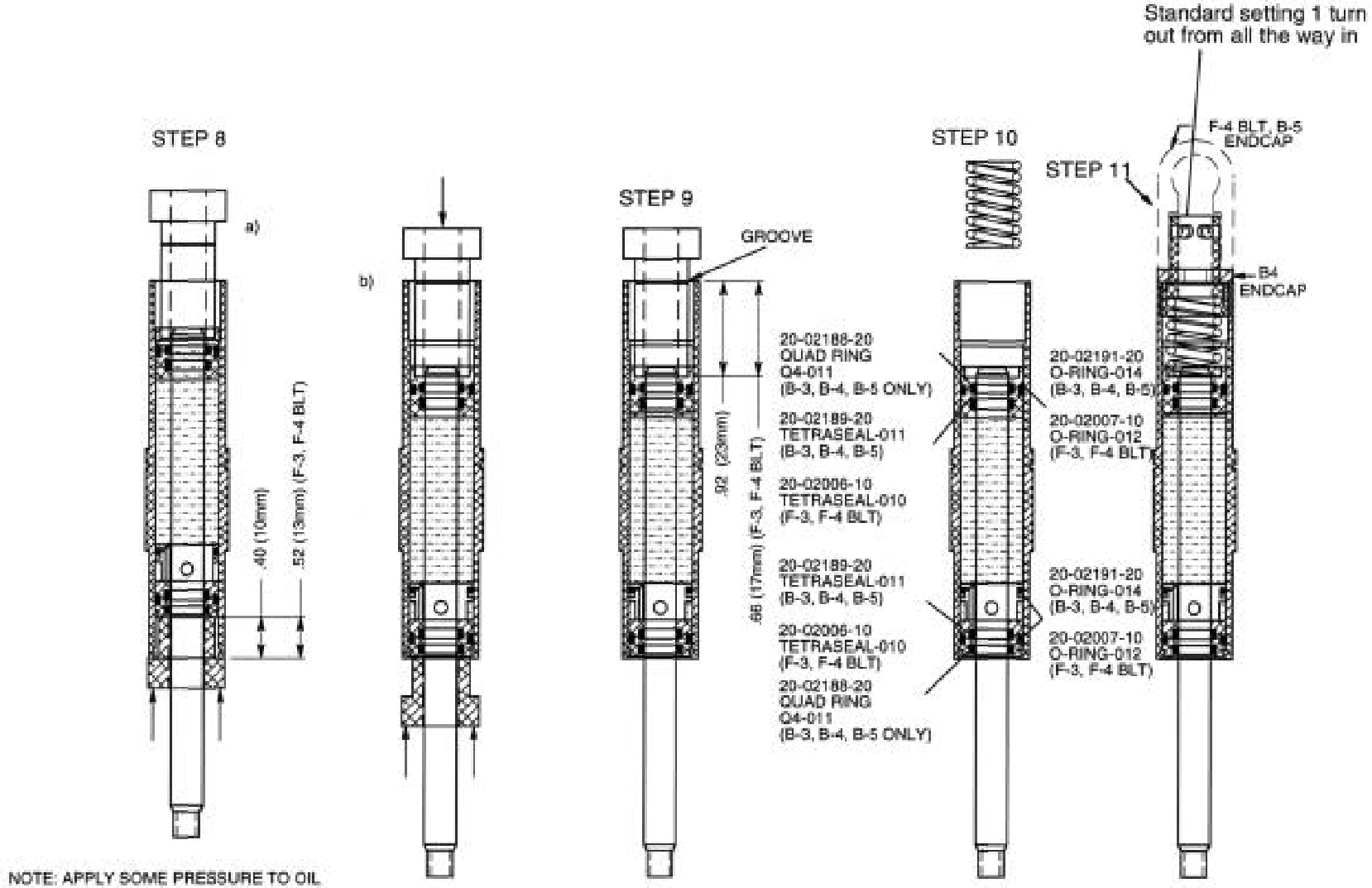
11. Compress spring and screw on endcap.

F4 BLT, B3, B4 & B5 SHOCK ASSEMBLY INSTRUCTIONS



STEP 1) PLACE WIRE RING IN GROOVE.
STEP 2) PUSH LOWER SEAL HOLDER INTO PLACE AGAINST WIRE RING
STEP 3) COVER HOLE IN SEAL HOLDER WITH FINGER AND FILL SHOCK BODY WITH OIL.
STEP 4) SLIDE SHAFT WITH PISTON DOWN THROUGH OIL *SLOWLY* UNTIL SHAFT BOTTOMS ON LOWER SEAL HOLDER.
*NOTE: KEEP HOLE IN LOWER SEAL HOLDER COVERED WITH FINGER UNTIL SHAFT STARTS TO PROTRUDE THROUGH. THIS WILL PREVENT MOST OIL FROM DRAINING OUT
STEP 5) a. REFILL SHOCK BODY WITH OIL.
b. USING APPROPRIATE OIL LEVEL SETTING TOOL, PUSH LOWER SEAL HOLDER UP UNTIL SETTING TOOL CONTACTS SHOCK BODY.
*NOTE: DO NOT PUSH UP ON SHAFT. PUSH ONLY ON LOWER SEAL HOLDER WITH OIL LEVEL SETTING TOOL.
STEP 6) PUSH UPPER SEAL HOLDER INTO PLACE ON SHAFT.
STEP 7) USE SEAL HOLDER SETTING TOOL TO MAKE SURE UPPER SEAL HOLDER IS FULLY SEATED IN OIL.
**NOTE: BE CAREFUL NOT TO DAMAGE OUTER O-RING ON THREADS IN SHOCK BODY.

****NOTE:*
WE RECOMMEND USING AMP SERVICE TOOLS ALTHOUGH REBUILD CAN ALSO BE DONE WITHOUT TOOLS USING THE DIMENSIONS SHOWN IN DRAWING.



NOTE: APPLY SOME PRESSURE TO OIL LEVEL SETTING TOOL WHILE PUSHING ASSEMBLY DOWN TO ENSURE THAT NO AIR ENTERS THE SYSTEM.

STEP 8) USE SEAL HOLDER SETTING TOOL TO PUSH ENTIRE ASSEMBLY DOWN UNTIL LOWER SEAL HOLDER STOPS ON WIRE RING.
STEP 9) MAKE SURE GROOVE IN SEAL HOLDER SETTING TOOL IS EVEN WITH TOP OF SHOCK BODY AFTER SETTING UPPER SEAL HOLDER.
STEP 10) PLACE SPRING RETAINER AND COMPENSATOR SPRING IN SHOCK HOUSING.
STEP 11) COMPRESS SPRING AND SCREW ON ADJUSTER AND ENDCAP. TURN ADJUSTER ALL THE WAY IN AND BACK OUT 1 TO 2 TURNS. (ADJUSTER: B-3, B-4, B-5 ONLY)

* NOTE: SPRING RETAINER ADDED FROM AUG.97 PRODUCTION ONWARD SHOULD BE RETROFITTED TO ALL PRIOR SHOCKS TO PREVENT THE SPRING FROM TOUCHING SHAFT

IV. WARRANTY

AMP Research Suspension forks are covered under a six (6) month limited warranty on pivots and one (1) year on Materials and Manufacturing defects for parts and labor. See Exhibit A for other warranties. During the warranty period, any part found to be defective under the terms of this limited warranty will be, at the manufacturer's option, repaired or replaced free of charge. Shipping charges and Dealer labor charges will be the responsibility of the original purchaser.

This Limited Warranty is made only to the original owner of this new AMP Research fork and must be purchased from an authorized AMP Research dealer, and it shall remain in force only as long as the original owner retains ownership of the AMP Research fork. This Limited Warranty is not transferable.

In order to obtain service under this Limited Warranty, the original owner must deliver the AMP Research fork to an authorized AMP Research dealer, or AMP Research directly, together with the proof of purchase/bill of sale or other dated proof of purchase document identifying the AMP Research fork by serial number.

This limited warranty does not apply to normal wear and tear, nor to defects, malfunctions or failures that result from an accident, abuse, misuse, neglect, normal wear and tear, improper installation, improper maintenance, unauthorized modification, use of unauthorized replacement parts, or misuse (including without limitation, bicycle racing, bicycle motocross, stunt bicycling or similar activities) of the AMP Research fork.

This limited warranty is the only express or limited warranty applicable to AMP Research forks. Any implied warranties, including warranties of merchantability and fitness for a particular purpose, shall be limited in scope and duration in accordance with this limited warranty. AMP Research shall not be responsible for any direct, incidental, consequential or exemplary damages suffered by any party. The foregoing statements of warranty are exclusive and in lieu of all other remedies.

This limited warranty gives you specific legal rights; you may also have other legal rights which vary from state to state or province to province. Some states or provinces do not allow limitations or exclusion of incidental or consequential damages; so, the above limitations and exclusions set forth herein may not apply to you.

The limited warranty set forth herein may not be extended, enlarged or otherwise modified by any AMP Research dealer, agent or employee, and AMP Research does not assume any liability or make any warranty except as stated in the limited warranty.

EXHIBIT A

AMP Research suspension forks are covered under a limited warranty for parts and labor:

- Hydraulic Shocks - Six (6) Months Warranty
- Pivot Pins and Bearings - Six (6) Months Warranty
- Fork - One (1) Year Warranty
- Springs - Lifetime Warranty

During the warranty period, any part found to be defective under the terms of this limited warranty will be, at the manufacturer's option, repaired or replaced free of charge. Shipping charges and Dealer labor charges will be the responsibility of the original purchaser.

All warranty claims must be sent with proof of purchase (copy of original invoice, date purchased and serial number*), freight prepaid, to AMP Research, 23531 Ridge Route, Laguna Hills, CA 92653.

* If the serial number does not appear on your paperwork, it can be found on the steering clamp of your fork (i.e. F#####).

All returns to AMP Research must be accompanied by a return authorization number which can be obtained by calling AMP Research at 949-461-5990 EXT. 5023 Office hours are 8:00am to 5:00pm Pacific Standard Time. Only items with an R/A number written on the outside of the box and shipped freight prepaid will be accepted. Along with the item there should be a brief note describing what needs to be repaired, a return shipping address, daytime phone and, if a warranty is requested, a copy of the original sales receipt. Warranty or repair work will not begin until this information is received. All items will be shipped back UPS ground within 48 hours of when they are received, unless other arrangements are made. Items repaired or replaced under warranty will be shipped back freight prepaid and items sent in for repair will have return freight added to the repair bill. UPS Red label (Next day), Blue label (2 day), or 3 day select is available at an additional cost. All products should be sent back clean and stripped of parts.

Outside the U.S.A. - Same as above except that all items should be sent back via U.S. Air Mail for fastest, most economical service. All freight charges, duties, customs and brokerage fees are the responsibility of the shipper.