SERVICE BULLETIN

M-866 March 4, 1983

SERVICE INFORMATION — FXRT

Headlamp Replacement

The headlmap is a replaceable bulb type, not a sealed beam unit. The bulb is made of quartz glass filled with halogen gas. This quartz halogen bulb is very delicate and must be handled with care.

CAUTION

Never touch the quartz glass bulb with your fingers. Finger prints will etch the glass and cause the bulb to fail. Always wrap the bulb in paper or a clean dry cloth during handling.

WARNING

The bulb contains Halogen gas under pressure. Handle bulb carefully and wear eye protection to avoid possible personal injury.

To replace the headlamp bulb, refer to Figure 1 and do the following:

1. From the rear of the fairing, unplug the connector.
2. Remove rubber boot, press wire clip together and remove bulb.
3. Install new bulb into housing and secure with wire clip.
4. Replace rubber boot and plug in the connector.

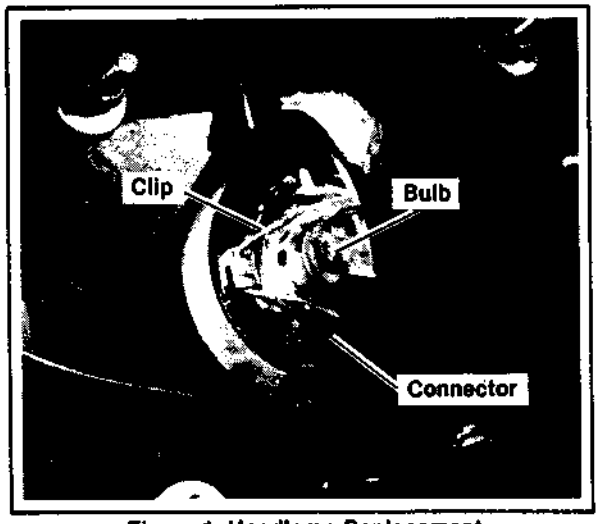

Figure 1. Headlamp Replacement

Saddlebag Removal

See Figure 2. The saddlebags can be removed by opening the saddlebag and removing the soft luggage bag and the four mounting bolts.

Saddlebag Installation

See Figure 2. The saddlebags are installed by aligning the holes in the bag with the mounting holes in the support bracket. Secure the bag in position by installing the four bolts and flat washers at the four mounting loca-

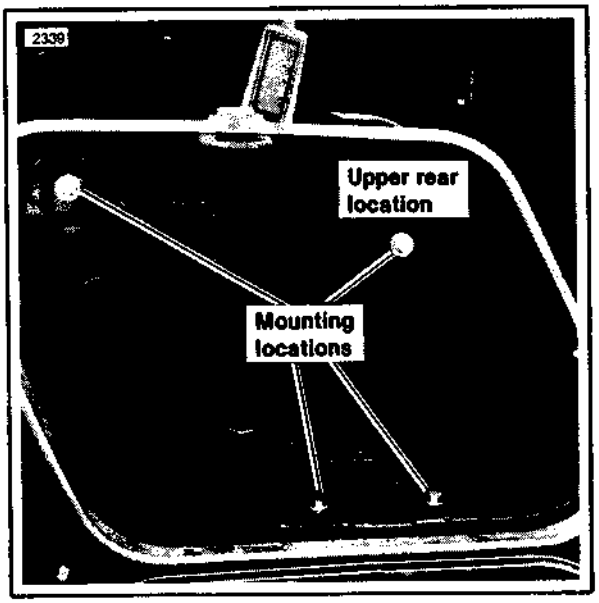

Figure 2. Saddlebag Mounting

ROUTING:	SERVICE MANAGER	SALES MANAGER	PARTS MANAGER	CHIEF MECHANIC	MECHANIC NO. 1	MECHANIC NO. 2	MECHANIC NO. 3	MECHANIC NO. 4	RETURN THIS TO:
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tions from the inside of the bag. The larger flat washer is installed at the upper rear mounting location. The rubber washers isolate the bag from the vehicle and should be used on both sides of the saddlebag wall. Locknuts with lockwashers are hand tightened until all saddlebag hardware is in place, then tighten locknuts to 35 in-lbs torque. The same procedure is followed for both saddlebags. Make sure the soft inner luggage bags are in the saddlebags.

Fairing Removal

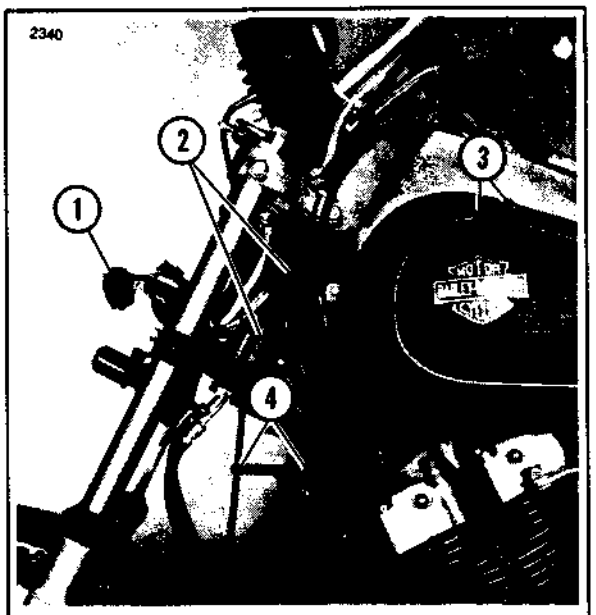
To remove the fairing for servicing or replacement of parts proceed as follows: See Figure 3.

1. Remove the attaching hardware, at each side (right and left), where the fairing is attached to the upper fairing braces and the lower mounting support. Keep the attaching hardware separate so that the correct fasteners will be reinstalled at the proper locations.

2. At the backside of the fork, at each side, remove the two bolts and lockwashers that secure the fairing bracket to the steering head.

3. Carefully remove the fairing a slight distance and disconnect the twelve pin connector.

4. Continue removing the fairing until it is clear of all the support mounting.



1. 12 pin electrical connector
2. Fairing bracket mounting location
3. Fairing brace mount location
4. Fairing support mount location

Figure 3. Fairing Mounting Locations

Fairing Installation

To install the fairing after servicing or replacement do the following:

1. With the aid of a second person, position the fairing in approximate position and connect the twelve pin connector.

2. Move the fairing so that the bottom of the fairing is resting on the lower mounting support and the holes in the fairing bracket lugs are aligned with the threaded bushings in the steering head. The encased wiring harness must pass over the upper lug of the fairing bracket at the left hand side.

3. Place a 5/16" heavy lockwasher on each of the four 5/16" x 5/8" hex head bolts. Insert the bolts through the bracket holes in the frame and hand tighten.

4. Place a flat washer on two of the hex head 1/4" x 1" bolts. Place a nylon washer on each bolt and position next to the flat washer. Take two nylon washers and place one between the underside of the fairing and the top side of the lower mounting support at each hole in the mounting support. Insert the bolts from the top side of the fairing through the mounting holes in the fairing nylon washer and support. Thread a 1/4" locknut onto each bolt and tighten to 8 ft-lbs torque. Repeat the procedure at the opposite side.

5. Tighten the four 5/16" x 5/8" hex head bolts at the center fairing bracket to 19 ft-lbs torque.

6. At one side align the two holes in the fairing brace with the two holes in the fairing, then insert two 1/4" x 3/4" black screws from the fairing side through the mating holes. Place a star lockwasher onto each bolt followed by a 1/4" hex head nut. Tighten each nut to 10 ft-lbs torque. Repeat this procedure at the opposite side.

Rear Air Shock Absorber

ADJUSTMENT

The rear suspension is adjusted by adding or removing air from the air valve located underneath the operator's seat. Refer to the chart for the correct air pressure.

The preferred pressure for personal riding comfort can be selected from the chart. Lower pressure gives a softer ride and higher pressure gives a firmer ride. Setting the pressure outside of the recommended range for loading will result in a reduction of available ride comfort. Pressures should be adjusted with the vehicle on the jiffy stand.

CAUTION

Air suspension components fill rapidly. When adding air to the front and rear suspension or accumulator, use a low pressure source such as a regulated pressure supply or a hand or foot operated pump, to prevent damage to air suspension components.

NOTE

Use a no-loss air gauge to accurately measure air pressure.

FXRT AIR SUSPENSION

	RECOMMENDED PRESSURES (PSI)		
LOADING	SHOCKS	FORKS	ACCUMULATOR
Rider weight up to 150 lbs:	4 - 8	4 - 8	25 - 30
For each extra 25 lbs., add:	3	2	— —
Passenger weight for each 50 lbs., add:	8	1	— —
Luggage weight for each 10 lbs., add:	2	— —	— —
Maximum Pressures:	40	20	30

Air Shock Absorber Removal

When removing the air shocks for replacement, remove and install one shock first, then the other. This will eliminate the need for raising the rear end of the motorcycle. If it is necessary to remove both shocks at once, place the motorcycle on a center stand with the rear wheel raised off the ground.

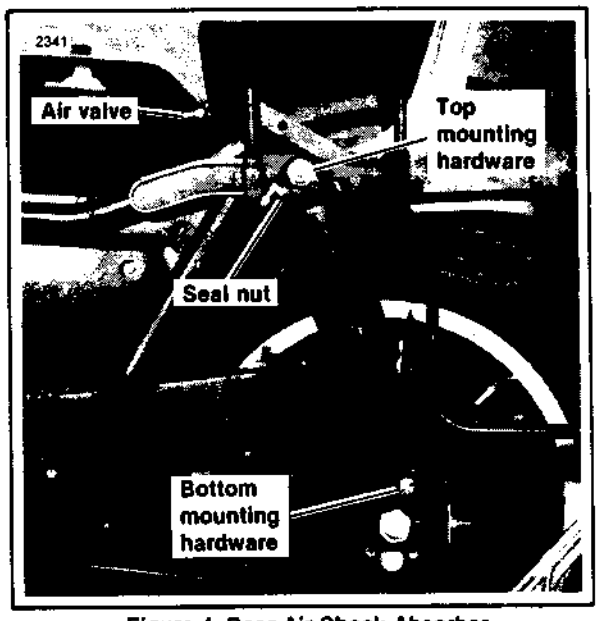


Figure 4. Rear Air Shock Absorber

1. Remove the saddlebags.

2. Remove the air line at the compression fitting, the top mounting nut and the bottom mounting bolt. Remove the air shocks. The brass elbow and seal nut remain on the shock unless they require service.

CLEANING, INSPECTION AND REPAIR

1. Examine the shocks for leaks. The unit should not leak. The shock is a non-repairable item and must be replaced if it is worn or leaking.

2. Clean and examine all other parts of the air valve system and replace any that appear worn or damaged.

Air Shock Absorber Installation

1. If the brass elbow at the top of the shock was removed, apply a coat of pipe sealant with teflon, Part No. 99630—77 on the threads. Thread the elbow into the shock casing at least four turns. Then position the elbow with the open end straight down and lock in place by tigthening the seal nut.

2. Fasten each shock to the frame and swing arm using the original mounting hardware.

3. Adjust the air shocks according to the air pressure chart.

4. Install the saddlebags as instructed earlier in this bulletin.

Front Fork Air Control Removal (Figure 5)

1. Remove the fairing as described earlier.

2. Bleed the front fork air control system.

3. Remove bolts (1) and (2) and banjo bolts (13).

4. Remove cable strap (7) and clamp holding hose (26) to fork tube.

   Disconnect solenoid from ground and wire harness end.

5. Remove the front fork air control system.

DISASSEMBLY, INSPECTION AND REPAIR

1. The front fork air control can be disassembled as shown.

2. Inspect gaskets (12), O-ring (9) and hose (26) for cracks or deterioration. Replace if necessary.

3. Inspect all fitting threads for damage. Replace if necessary. Use a flare fitting wrench on the fitting nuts when disconnecting tube (14) from valve assembly (19).

ASSEMBLY

1. When reassembling the front fork air control, use pipe sealant with Teflon, Part No. 99630—77 on all pipe threads.

NOTE

On all pipe thread fittings, hand tighten and then apply two turns with a wrench to secure. All flare fitting nuts must be torqued to 200 in-lbs.

Front Fork Air Control Installation

1. Place front fork air control on forks and connect solenoid ground wire and hot wire to main harness.

NOTE

If the slide tubes (14) are to be replaced or removed for servicing, they must be installed properly to prevent leakage. The flared ends of the tubes must be squarely aligned and seated fully before tightening the fittings. Be sure the fitting nuts are torqued to the full recommended valve.

2. Install banjo bolts (13) and tighten to 25-30 ft-lbs torque.

3. Place a flat washer (27) on each of the two bolts (2). Insert a lockwasher (3) between the bracket (15) and the lower fork bracket. Hold bracket (15) against the lockwashers with the holes aligned. Insert the bolts through the accumulator bracket and

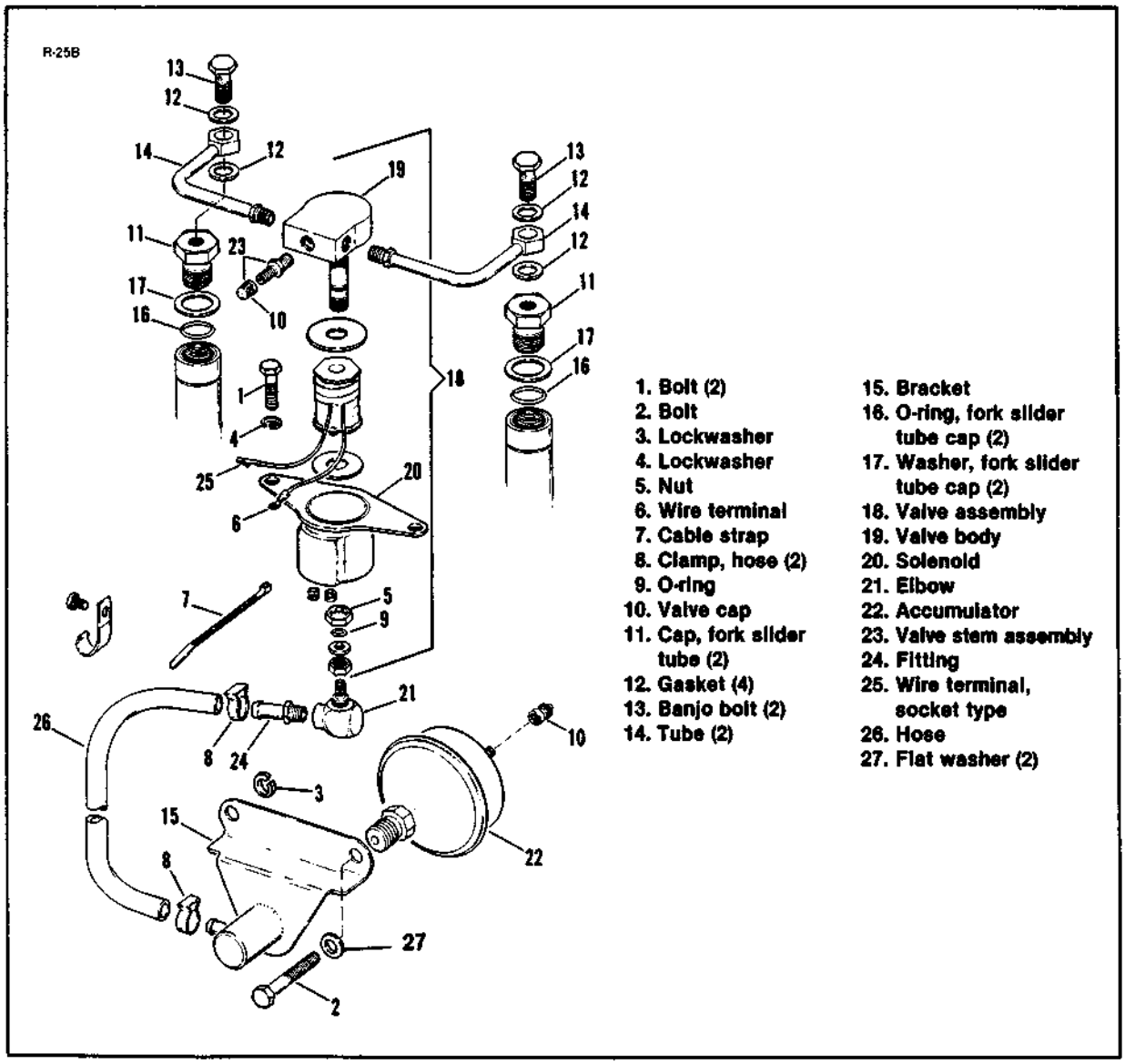


Figure 5. Front Fork Air Control

the lockwasher, then into the tapped hole in fork bracket. Tighen the bolts to a torque of 30-35 ft-lbs.

4. Install bolts (1) and tighten to 155-190 in-lbs torque.

5. Secure hose to fork and upper fork clamp with cable strap and clamp.

6. Refer to the air chart and service the front fork air control system.

Front Fork Removal

1. Refer to this Service Bulletin and remove the fairing and front fork air control.

2. Refer to the latest Service Manual and remove the front wheel, front fender and front forks.

Front Fork Disassembly

1. See Figure 6. Slide up dust cover (1), remove seal snap ring (2) and remove damper tube screw and washer (3).

2. Separate fork tube (4) and slider (5) by pulling them apart.

NOTE

Fork tube bushing (6) is pressed into fork slider (5). When pulling fork tube from slider, use a slide hammer type action. Bushing (7) on the bottom of the fork tube (4) will force bushing (6) out of the fork slider.

3. *Remove O-ring (8) and washer (9) from cap. Pull spring (11) from fork Tube (4). Remove damper tube (12) from fork tube. Remove both wear rings (13) from damper tube.*

CLEANING, INSPECTION AND REPAIR

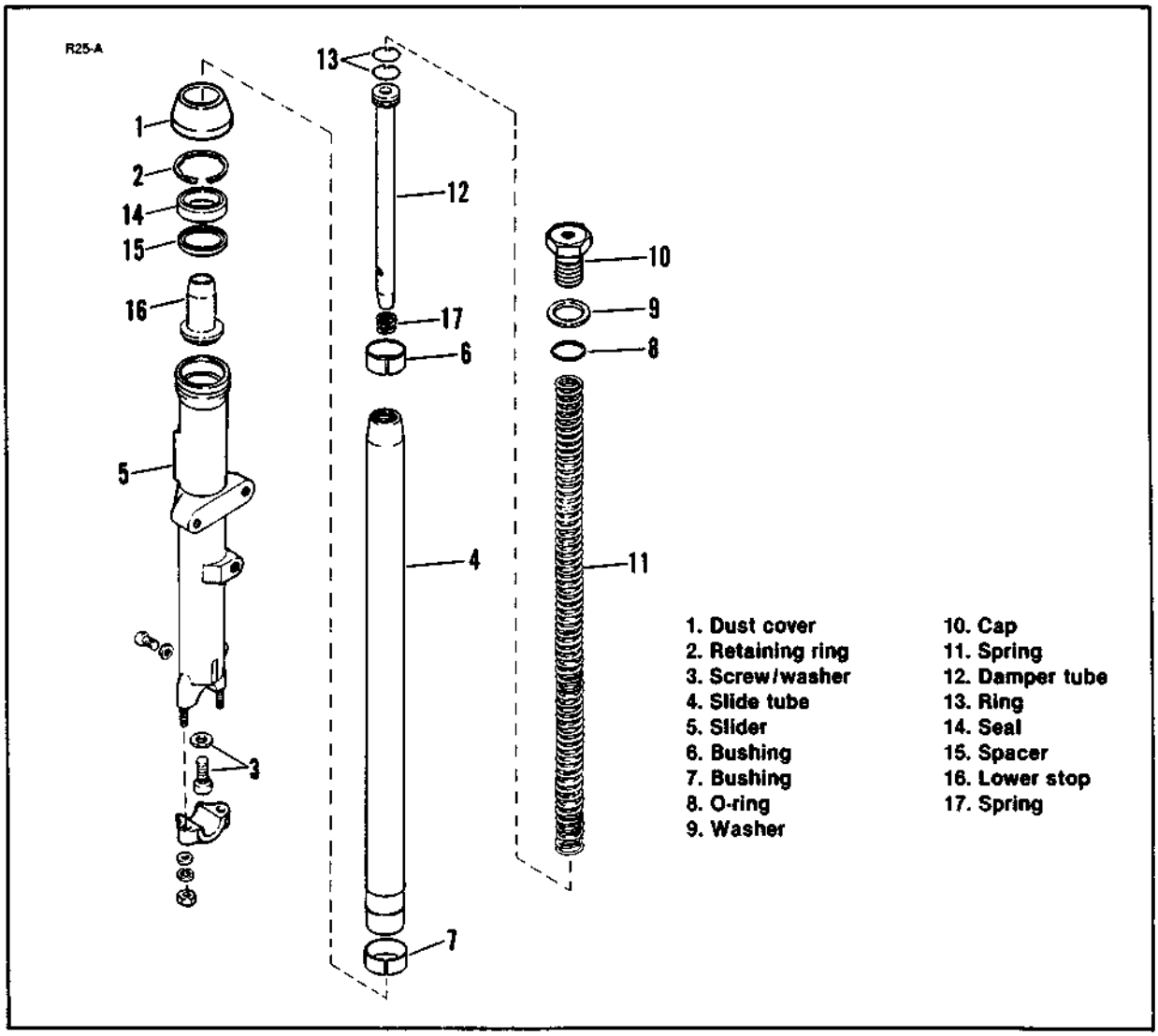


Figure 6. Front Fork

1. Replace the springs if they are broken or distorted.

2. Replace any seals, O-rings or bolts that appear worn, bent or broken.

3. Replace any broken or bent parts.

Front Fork Assembly

1. Place bushing (7) on the bottom of the fork tube. Insert lower stop (16) and spring (17) into slider.

2 .Insert fork (4) into slider (5). Install wear rings (13) on damper tube (12). Install damper tube (12) into slider and secure with screw and washer (13)

3. Place spacer (15) and seat (14) over bushing (6). Install the bushings with the stacked spacer and seal into the slider using installation tool HD-34190. Install seal retaining ring (2).

4. Install spring (11) in fork tube. Place O-ring (8) and washer (9) on cap (10).

5. Refer to the latest Service Manual and replace the forks, fender and front wheel.

NOTE

Fill forks with 7.2 oz. of Harley-Davidson type E fork oil if refilling and interior surfaces are wet. Fill with 7.4 oz. of oil at initial fill or if interior surfaces are dry.

6. *Refer to this Service Bulletin and replace the front fork air control and fairing.*

7. *Secure the speedometer cable to the inside of the fork tube above the fork stop with a cable strap.*

8. *Service the front fork air control according to the air chart under rear shock absorber in this Service Bulletin.*

Tires

The FXRT uses Dunlop K-291T tubeless tires. The front tire is and MM-90H-19 and the rear tire is an MT-90H-16.

Tires should be inspected for punctures, cuts, breaks and wear at least weekly.

See Figure 7. On tubeless wheels, damaged or leaking valve stems must be replaced. Place rubber grommet on valve stem with shoulder in recess of the valve stem head.

Insert valve stem into rim hole and install metal washer with raised center facing away from the rim. Install hex nut and tighten to 20-25 in-lbs torque on the rear, 35-40 in-lbs torque on the front.

Install second hex nut on rear wheel valve stem. While holding first nut with wrench, tighten second nut to 40-60 in-lbs torque.

WARNING

Tubeless tires may be repaired in the tread area only if the puncture is 1/4 in. or smaller. Never repair a tire with less than 1/16 in. tread depth. All repairs must be made from inside the tire.

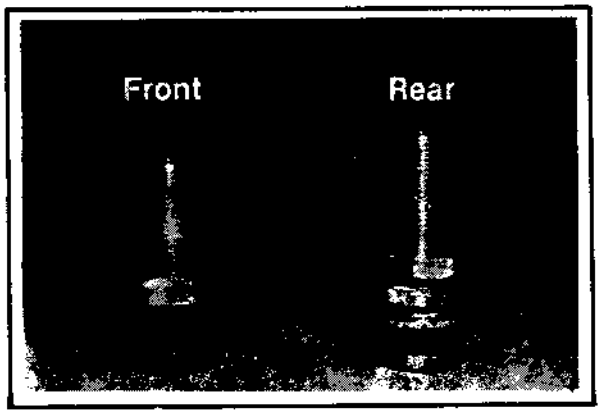


Figure 7. Air Valves