

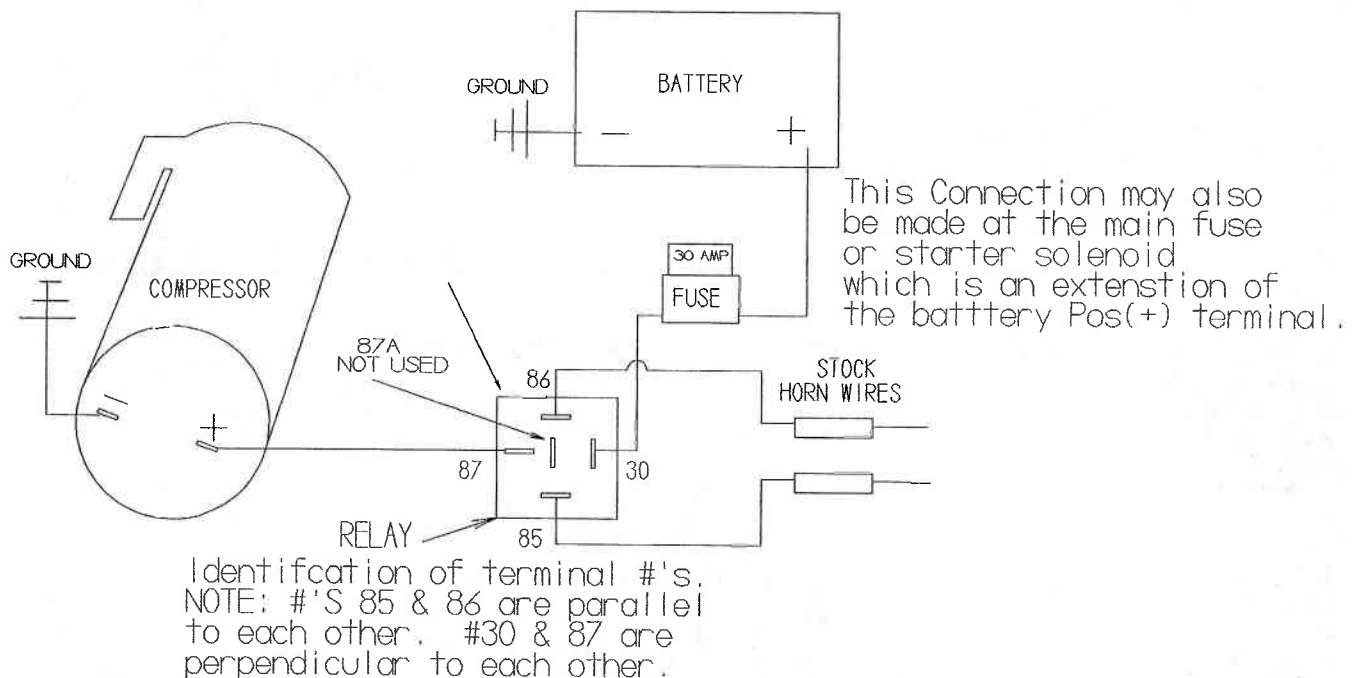
AIR HORN BASIC OPERATION PRINCIPLES AND ELECTRICAL WIRING DIAGRAM

The motorcycles stock horn draws only a small amount of power (less than 1 amp.) which comes directly from the horn button on the handlebars. The air horns electric air compressor draws considerably more power (approx. 8 amps). This requires the use of a relay, heavier gage wire and fuse to prevent damage to the horn button contacts as well as provide enough amperage to run the compressor at full speed.

A relay is a switch that is able to handle higher amperage loads and be controlled remotely by a small switch like a horn button. In the wiring diagram shown when the horn button is pushed power flows through terminals 85 & 86, this activates a small electromagnet inside the relay. This engages a set of heavy-duty contacts between terminals 30 & 87 which allows the higher amperage power to flow from the battery to the compressor.

The air compressor creates an almost instant air pressure to the horns. Because the pressure is created so fast there is no need for an air storage tank as on a big truck or R.V. Although the pressure is very low (12-15 psi.) it delivers a large volume of air (3 CFM cubic feet per minute). This low pressure high volume air supply causes a diaphragm or reed at the base of the horn to vibrate at a very high speed or frequency. The exact speed at which it vibrates is varied by the length of the horn or "trumpet". The longer the trumpet vibrates slower at 450 times per second "Hz" (Hertz), thus producing the lower tone of the two. The short or high tone trumpet operates at 550 MHz. Together they produce an extremely loud 125 dbl.(decibels) this is approximately 4 times louder than most electric motorcycle horns @ 87dbl.

ELECTRICAL WIRING DIAGRAM



AIR HORN INSTALLATION F.A.Q. TROUBLESHOOTING

All components are tested for operation and quality at the factory. An inoperative or bad component is highly unlikely but not impossible. If you are having problems please check the following

"NOTHING HAPPENS WHEN THE HORN BUTTON IS PUSHED"

1. Check ignition switch. Ignition must be in the "on" position.
2. Check for power to the stock horn wires. Attach a test light or volt meter to the stock horn wires at terminals 85 & 86 of the relay. You should have power when the horn button is pushed with the ignition on, if not check the wires, connections and the stock horn fuse (located in the fuse box).

"ALL I HEAR IS A CLICKING NOISE COMING FROM THE RELAY WHEN I PUSH THE HORN BUTTON"

1. Using a test light or volt meter test for power at relay terminal 30 or 87 coming from the battery pos.(+) terminal through the 30 amp fuse (provided).If no power check fuse and connections.
2. Test for power coming out of the opposite relay terminal 87 or 30 with the ignition switch in the "on" position and the horn button is pushed. If there is no power the relay is faulty and must be replaced.
3. Test for power at the compressor pos (+) terminal with ignition "on" and horn button pushed. If there is no power check the wire from relay and connections. If there is power check the compressor ground (-) wire connections, be certain you have a good metal connection to the frame, many times paint will prevent the terminal from making a solid connection. If these seem to check out O.K. you can test the compressor running jumper or test wires from the battery + and - directly to the compressor's terminals

"THE COMPRESSOR RUNS BUT THE HORNS DON'T BLOW OR SOUND WEAK"

1. Check for a kinked, pinched, cut or split hose, even a partially kinked or crimped hose will cause weak or non working horns.
2. Check to be sure all hose connections are secure.
3. Check for sufficient air supply. Disconnect the air supply hose from the "Y" connector, turn on the ignition and push the horn button, place your finger over the hose from the compressor, you should feel some pressure and flow (the compressor only generates 3 cfm at 12-15 psi.
4. If there is no air coming from the compressor check the electrical connections at the compressor. Pos (+) to the relay and neg (-) to ground. If the connections have been accidentally reversed the compressor will suck air instead of blowing it.

"I HAVE AIR COMING OUT OF THE HOSE BUT THE HORNS SOUND WEAK OR STILL DON'T BLOW"

Occasionally during shipping a small piece of packing material may become lodged in one or both of the horns diaphragms or "reeds". This may also occur after a period of time from an accumulation of road dirt, bug residue and water. Regular use will generally blow this debris from the horns, however periodic cleaning may be required and will keep them sounding their loudest and best. You can clean them out by: This first method is a quick and easy thing to try and works 70% of the time.

1. Remove the two hoses from the horns by prying them off the hose barb with a blade screwdriver at the edge of the hose.
2. Spray a small amount of WD-40 or similar penetrating oil into each horns air inlet, using a high pressure "shop" air or blow gun give a blast of air into each inlet. This will dislodge most debris and lubricate the diaphragms. It should produce an extremely loud noise!.
3. Re-attach the hoses and try the horns again
4. Also check that there is a minimum of 1/2" clearance between the front or open end of the horn and the front cover, if not remove the cover, re-bend the spring clips that attach it and replace it to get the proper clearance.
5. If it does not help try removing the horn set from the motorcycle. Mix 2-3 ounces of dish soap in a bucket of hot water. Place the horn set in the soapy water (submerge them) for about 15 minutes. Remove the horns from the water and blow into the air fitting on each horn with a high pressure air "blow gun".

If you are still having difficulties and require further technical assistance please call us direct
Monday thru Friday 7 am to 3:30 pm CST. at 1-262-763-8222