



INSTRUCTIONS

-J03137

REV. 10-23-03

Kit Number 29045-97B

DYNOJET® KIT

General

This kit is designed for use on 1996 and later XL 1200 (except XL 1200S) and 1996-2000 1340 models.

Kit Contents

See Service Parts Illustration and parts list at the end of this sheet for kit contents.

NOTE

Refer to applicable Service Manual for detailed instructions to remove necessary components. Service Manuals are available from any Harley-Davidson Dealer.

CAUTION

Harley-Davidson® motorcycles equipped with some Screamin' Eagle® high-performance engine parts may not be used on public roads and in some cases must be restricted to closed course competition. This engine related performance part is intended for racing applications and is not legal for sale or use in California on pollution controlled motor vehicles. Engine related performance parts are intended for the experienced rider only.

WARNING

When servicing the fuel system, do not smoke or allow open flame or sparks in the vicinity. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury.

Carburetor Removal

Refer to the appropriate Service Manual and follow the instructions in the "Carburetor" section to remove the Carburetor.

Installation

1. See Figure 1 and Service Parts Illustration. Remove the carburetor top. Remove the vacuum piston lift slide, slide spring, and spring retainer from the carburetor. Remove the stock needle. Locate the slide lift hole. Using the slide drill (15) supplied in kit, enlarge the slide hole. **Do not drill the needle hole.**
2. See Service Parts Illustration. Install the E-Clip (8) to the new DYNOJET needle (7) at groove #3. Install the DYNOJET washers (9) above the E-Clip.

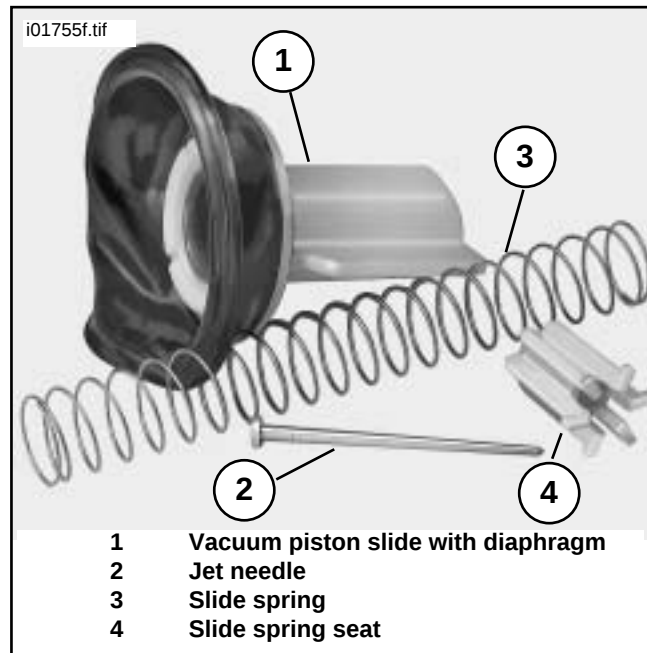


Figure 1. Vacuum Piston Chamber Slide Components

3. Remove and discard the stock spring. Install the new DYNOJET slide spring (11) from the kit, making sure that the slide spring is aligned properly.

NOTE

These are recommended starting points. Jet changes may be required during tuning.

4. See Figure 2 and Service Parts Illustration. Place the carburetor upside down on a bench. Remove the chamber assembly and the carburetor float bowl. Set the float bowl aside for later assembly. Remove the stock main jet and the emulsion tube, sometimes referred to as the main jet holder. Ensure that the Needle Jet does not fall out during this procedure. Replace the stock jet holder with the new DYNOJET emulsion tube (10) provided. When the DYNOJET emulsion tube is fully seated, there will still be threads visible. Install the DYNOJET main jet provided. Use the DJ160 main jet with a completely stock bike. Use the DJ170 main jet with an aftermarket airbox, or exhaust. With an aftermarket exhaust, airbox and cam use DJ180 main jet. If you have internal motor modifications, use the DJ190 main jet.

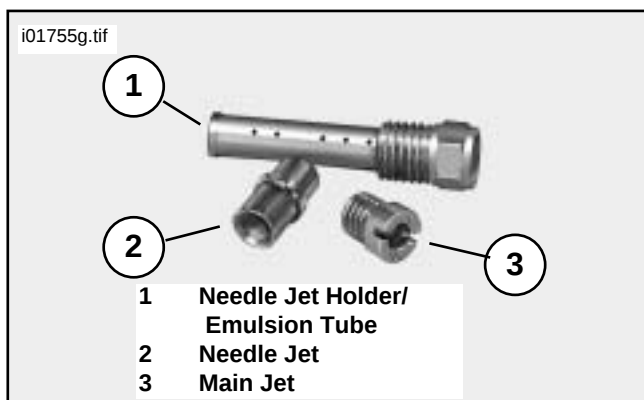


Figure 2. Stock Carburetor Jets and Holder

NOTE

During the next step, care must be taken not to drill through the Idle mixture screw. The Idle mixture screw is directly underneath the plug, be ready to pull back on the drill the instant you break through the plug.

5. See Figure 3 and Service Parts Illustration. Locate the Idle mixture plug (1). If you see a Idle mixture screw head not plugged, proceed to the adjusting procedure. With the plug drill bit (16) provided, carefully drill through the plug. Use the screw (17) provided to secure and remove the plug.

6. Carefully turn the Idle mixture screw clockwise until it seats, then turn out 3-1/2 turns.

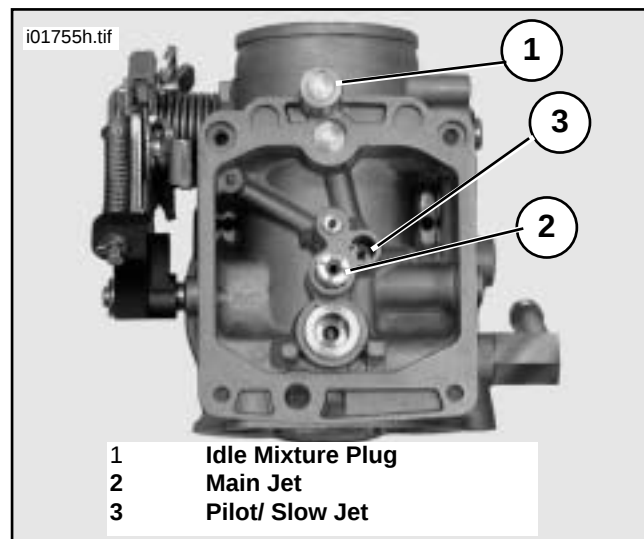


Figure 3. Idle Mixture Plug Location

NOTE

If the Idle mixture screw setting exceeds 3.5 turns to achieve low speed drivability when running a free flowing aftermarket exhaust and/or other modifications, install a larger pilot / slow jet.

Thunder Nozzle Installation

NOTE

DO NOT INSTALL the Thunder Nozzle, Check Ball, and Check Ball Weight on 2004 and later XL models. For these models, skip steps 1 and 2 and proceed to step 3.

1. See Figure 4 and Service Parts Illustration. With the carburetor float bowl removed, using a vise, clamp onto the stock accelerator pump nozzle. Remove it by twisting and pulling it out of the float bowl. Remove the stock check valve.

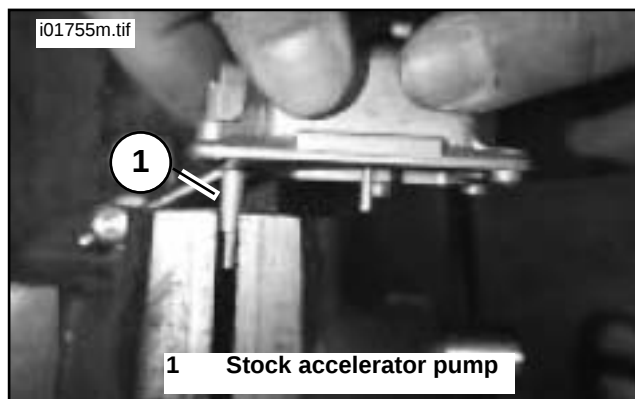


Figure 4. Stock Float Bowl and Accelerator Pump in Vise

2. See Figure 5 and Service Parts Illustration. Install the new check ball (13) and the new brass weight (14) into the float bowl. Press the new DYNOJET Thunder Nozzle (12) into the stock pump nozzle hole and lightly tap it into place with a soft hammer. The spray hole in the nozzle should face the brass float bowl drain tube.

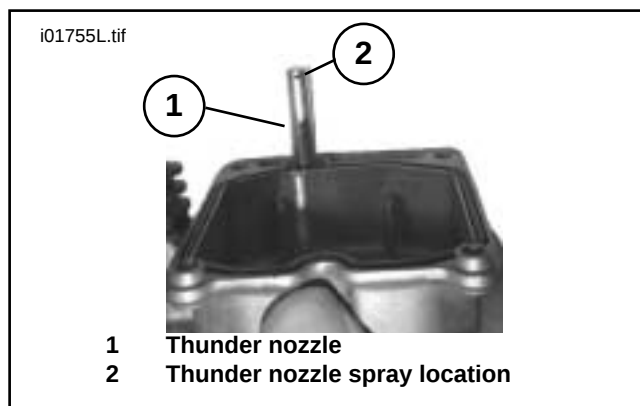


Figure 5. Stock Float Bowl and Thunder Nozzle Installed

3. Carefully reinstall the float bowl gasket and the float bowl.

Carburetor Installation

For installation procedures refer to the "Carburetor" section in the Service Manual. Use the fuel hose clamp (18) provided.

NOTE

Prior to performing any jetting changes, ensure the carburetor and manifold are installed correctly and there are no intake leaks. Also make sure the float is adjusted correctly (Refer to the "Fuel System" section in the Service Manual for float adjustment procedures).

TROUBLE SHOOTING GUIDE

NOTE

Proper idle before troubleshooting is required.

WARNING

BEFORE STARTING THE MOTORCYCLE: Check fuel line and vacuum line. Open and close the throttle checking for smoothness and full operation. Check accelerator pump action to make sure actuation rod is installed correctly in float bowl. Turn on fuel petcock and check for any fuel leaks.

Check on Initial Start-Up

1. Start the engine, turn the handlebars from lock to unlock to ensure cables are routed properly.
2. Blip the throttle 2 to 3 times to ensure linkage is not sticking.
3. Check the engine kill switch for correct operation.

After completing your installation and following the proper safety precautions, the machine should function properly with noticeable performance gains. If the machine functions well, but does not seem to have any performance gain, try needle positions on either side of the base settings to improve performance. If the machine has more pronounced troubles in function and performance, read through the troubleshooting guide. Find the problem description that best matches your trouble, and perform the recommended adjustment procedures. In some cases, more than one description closely resembles your problem. If so, perform each of the adjustment procedures in the easiest manner or the most logical conclusion.

Start and Idling Problems

(Pilot jet must be stock)

1. Motorcycle will not start cold.

***It is important to know that your bike will start and idle without your needle, slide, or main jet installed. DYNOJET kits do not alter your stock idle circuit, or the starting circuit. Also Check:

- a. Fuel in the float bowl.
- b. Choke plunger for proper operation.
- c. Ensure throttle plate is closed. Check throttle play.
- d. Vacuum leaks (vacuum hose and area around intake manifold).
- e. Float bowl is not flooding over with gas (float damage, or dirt in needle valve).

2. Motorcycle will not start hot.

***It is important to note whether the bike starts hard only when you let it sit for a period of time, or starts hard any time when hot. Both of these conditions are usually "rich" problems. If you have trouble after the bike sits, then check for gas tank venting problems. Also Check:

- a. Idle mixture screw turned out too far.
- b. Float bowl is not overflowing with gas.
- c. Pilot/ Slow jet (not stock).

3. Motorcycle idles rough until it reaches normal running temperature:

- a. Idle mixture screw set too "lean". Turning counterclockwise will enrich mixture.

4. Motorcycle idles well until it reaches normal running temperature, then idles rough and possibly stalls.

- a. Idle mixture screw turned out too far.
- b. Pilot/ Slow jet (not stock).
- c. Choke plunger or choke cable not returning to closed position.

5. Motorcycle starts, but does not idle at all.

- a. Idle mixture screw turned out too far.
- b. Vacuum hose disconnected.
- c. Pilot/ Slow fuel jet plugged.
- d. Manifold air leak.
- e. Idle turned down too far.

6. Motorcycle starts, but does not idle at all. Bike seems to rev slowly off idle with possible black smoke.

- a. Idle mixture screw turned out too far.
- b. Pilot Air Jet plugged.
- c. Choke not returning to off position.
- d. Pilot/ Slow jet (not stock).
- e. Fuel leaking past needle valve.

7. Low speed and cruising problems: (Engine does not accept throttle past idle, engine accepts past throttle but pops through carburetor, engine surges when holding steady speed, engine is very cold-blooded and choke has to be left on for a long time).

- a. Check that main jet is drilled completely or plugged.
- b. Check for vacuum leaks.
- c. Check vacuum hose for leakage.
- d. Check float level is not too low.
- e. Check accelerator pump operation.

If the above check out, then raise the needle one groove at a time and retest.

Acceleration Problems

Proper idle must be established before off idle troubleshooting is carried out.

1. Engine accelerates from down low, then goes flat. Seems to be worse in high gears.
 - a. Check needle installation, there must be three washers above the E-Clip.
 - b. Check needle shroud installation.
 - c. Drag pipes will always cause problem.
 - d. Poor choice of cam will cause flat spots in mid-range.

If the above check out, lower needle one groove at a time and retest.

2. Engine accelerates to red line but flattens out. Seems to be worse in higher gears and when hot.
 - a. Check parameters on fact sheet (main jet size for your application).
 - b. Check intake air flow. Many aftermarket filters don't flow as well as stock ones.
 - c. Check exhaust flow. Some aftermarket pipes flow much worse than stock ones, but may be noisier.

If the above check out, lower the main jet size.

3. Engine seems sluggish when accelerating in low gears or when cold. Seems to be better when rolling and in high gear.
 - a. Try restricting the air entering the air filter. If problem gets better, then try going to a larger main jet.
4. Bike functions normally with the exception of popping when decelerating.
 - a. Check exhaust leaks and intake leaks.

If the above check out, try enriching mixture screw slightly, making sure bike idles smooth.

For Technical assistance: Contact your DYNOJET distributor or call Dynojet U.S.A. (800)-992-4993

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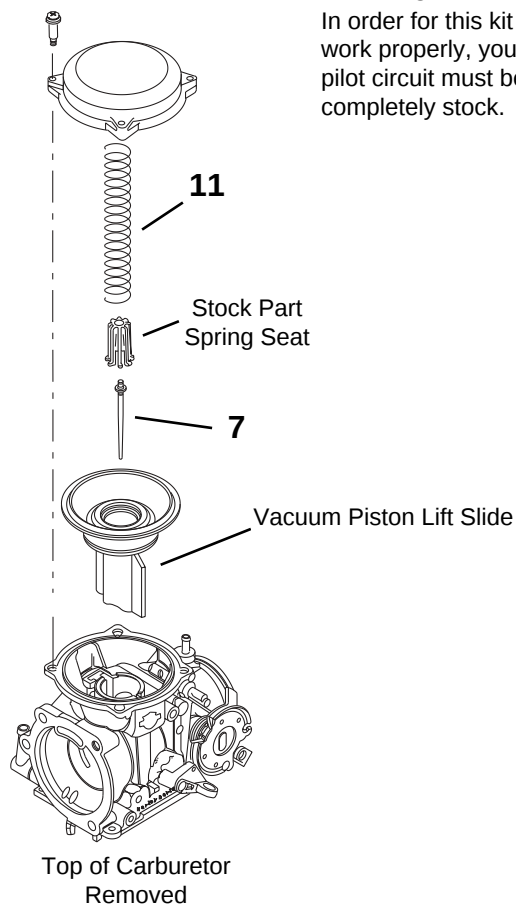
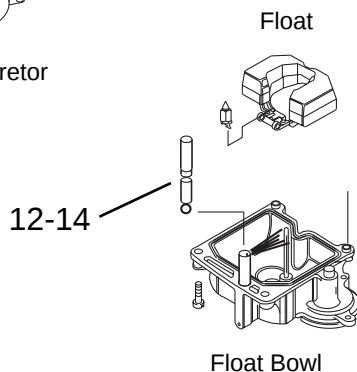
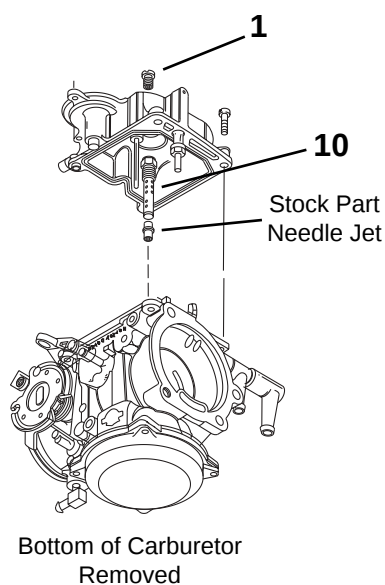
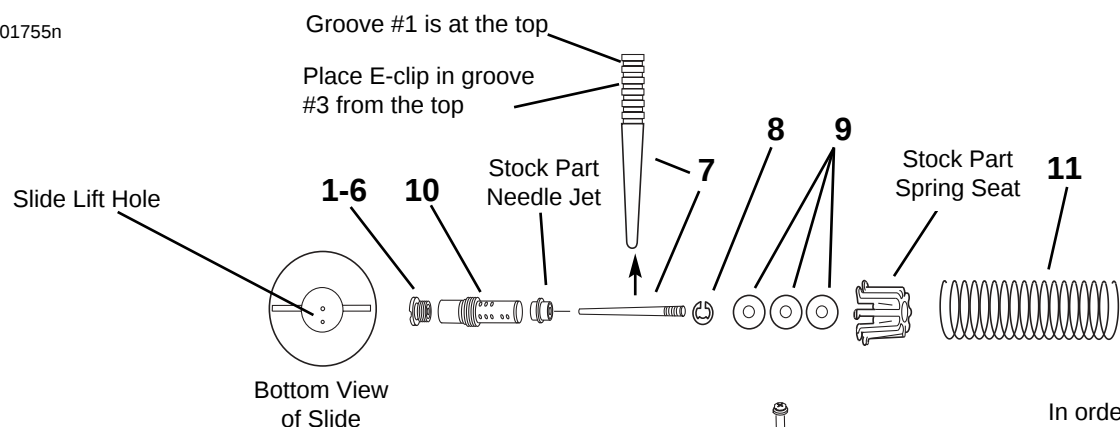
Service Parts

Kit No. 29555-99B

Date 10/03

DYNOJET KIT

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Item	Description	Part Number	Item	Description	Part Number
1	Main Jet	DJ150	11	Slide Spring	DSP009
2	Main Jet	DJ160	12	Thunder Nozzle	THNOZ2
3	Main Jet	DJ170	13	Check Ball	BB #1/8
4	Main Jet	DJ180	14	Check Ball Weight	DW070
5	Main Jet	DJ190	15	Slide Drill (not shown)	DD #29
6	Main Jet	DJ200	16	Plug Drill (not shown)	DD #5/32
7	Fuel Jet Needle	DNO855	17	Screw (not shown)	DS0001
8	E-Clip	DE0001	18	Clamp (not shown)	9946
9	Adjusting Washers (3)	DW0001			
10	Emulsion Tube	DET001			