



# INSTRUCTIONS

-J00620

REV 7-24-96

Kit Numbers 16457-96, 16458-96, 16459-96, 16460-96

## LIGHTNING CYLINDER HEADS

### General

This instruction sheet covers the following Cylinder Head Kit part numbers:

Part No.	Description
16457-96	As-cast heads with Buell S1 valve springs
16458-96	Painted heads with Buell S1 valve springs
16459-96	As-cast heads with XR 750 valve springs
16460-96	Painted heads with XR 750 valve springs

These kits are designed for installation on 1991 and later XL 1200 models.

### Kit Contents

This kit contains the following components:

QTY	DESCRIPTION
1	Front cylinder head assembly
1	Rear cylinder head assembly
1	Product information label (Req'd for CA)

### Additional Required Parts

On all models, a Top End Overhaul Gasket Kit, Part No. 17032-91 must be purchased from your Harley-Davidson Dealership. In addition, on 1991 models the four (two per head) stock short head screws must be replaced with Part No. 16480-92 heads screws.

#### NOTE

Service Parts for these kits are listed on page 2. A Service Manual for your motorcycle is available at your Harley-Davidson Dealership.

### Installation

#### CAUTION

These Lightning head assemblies are intended for high-performance applications only. This engine-related performance part is legal for sale or use in California on pollution-controlled motor vehicles. Use of these Lightning head assemblies may reduce or void the Limited Warranty coverage.

1. Refer to appropriate Service Manual for all removal, assembly and disassembly procedures.
2. Remove existing cylinder head assemblies.

#### CAUTION

For 1991 models, it is very important that head screws, Part No. 16480-92 are used. The stock 1991 screws length is 1-11/16 in. The Part No. 16480-92 screws length is 1-7/8 in. Damage to engine could occur if shorter screws are used.

3. Install new cylinder heads using appropriate Service Manual procedures and new gaskets from Top Overhaul Gasket Kit, Part No. 17032-91. On 1991 models, make certain Part No. 16480-92 heads screws are used.

#### NOTE

Due to increased compression ratio, use at least 91 octane gasoline. Octane rating is usually found on the pump.

4. Check assembly for proper installation and operation.

#### NOTE

The product information label contained in this kit is required in the state of California only. This label is required to aid in passing the California Smog Check Program. Place the information label on the right side of the frame directly beneath the VIN sticker. Do not place the label over other product information labels. Do not place the label on motorcycles other than those specified in this instruction sheet.



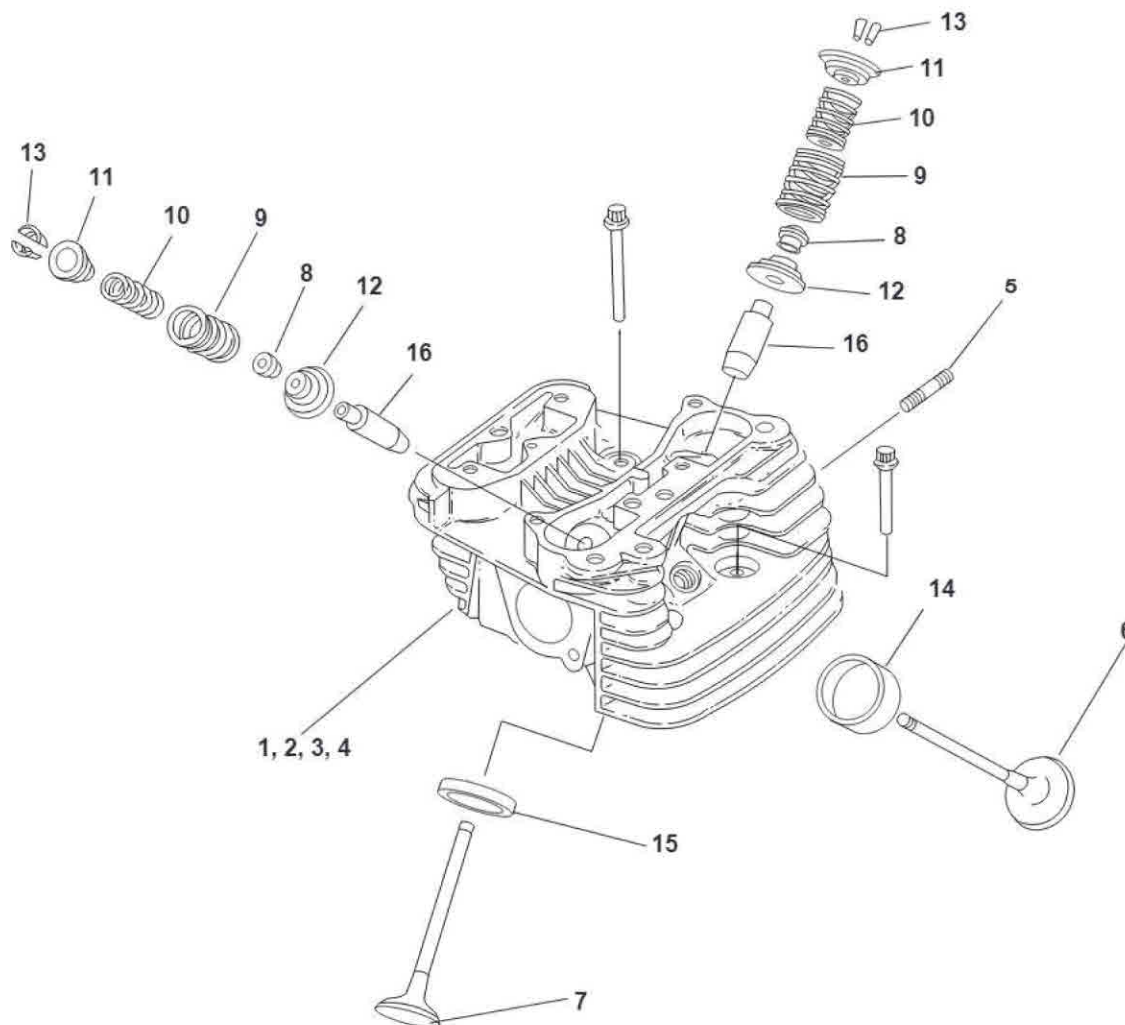
# Service Parts

Part No. See below.

Date 7-22-96

## Lightning Cylinder Heads

sp16457



**Kit Numbers 16457-96, 16458-96**

Item	Description	Part No.
1	Front cylinder head, as cast*	16454-96
2	Rear cylinder head as cast*	16456-96
3	Front cylinder head, painted*	16453-96
4	Rear cylinder head, painted*	16455-96
5	Stud, exhaust port	16715-83
6	Intake valve	18023-87
7	Exhaust valve	18024-87
8	Seal, valve	18001-83B
9	Valve spring, outer	18201-83
10	Valve spring, inner	18202-83
11	Collar, valve spring-upper	18219-831
12	Collar, valve spring-lower	18222-83
13	Retainer, valve collar	18229-83
14	Intake valve seat	18020-87
15	Exhaust valve seat	18022-96Y
16	Valve guide, intake and exhaust	18113-96Y

**Kit Numbers 16459-96, 16460-96**

Item	Description	Part No.
1 through 8 and 14 through 16,	same as Kit 16457-96	
17	XR 750 valve spring kit (not shown) (Above kit contains valve springs, collars and valve collar retainers.)	18210-84B

\* With valve guides and seats installed