

# SERVICE

## SHOP DOPE

No. 366 (Supersedes No. 268 which should be destroyed)

December 19, 1955

### VALVE SPRING TESTING INFORMATION

The information in this bulletin is to be used as a guide in replacing intake and exhaust valve springs which have weakened or "taken a set" due to excessive heat and extended service in the motorcycle engine. Valve springs which are too weak will not close properly at high speeds causing erratic engine operation, and probable damage to the valve, valve guide and seat.

The following table lists valve spring testing specifications for new valve springs applying to all Harley-Davidson 4-cycle engine models. To use the information listed when testing springs, a valve spring compression testing device is needed which will compress the spring the specified distance and at the same time measure the pounds compression. It is recommended that Harley-Davidson Valve Spring Tester and Torque Wrench, Part # 96797-47, be used for this purpose.

### VALVE SPRING SPECIFICATIONS

MODEL -	PART NO.	FREE LENGTH	VALVE CLOSED		VALVE OPEN	
			COMPRESSED LENGTH	POUNDAGE	COMPRESSED LENGTH	POUNDAGE
1932 to 1940 45 Side Valve	18201-32	2-3/16	1-7/8	50 to 60	1-9/16	90 to 100
1941 and later 45 Side Valve (except K Model)	18201-41	2-19/32	2-3/16	50 to 60	1-7/8	90 to 100
1930 and later 74 & 80 Side V.	18200-30	2-7/16	2-1/8	55 to 65	1-3/4	125 to 135
1936 and later 61 & 74 O.H.V.	18203-36 (outer)	1-13/16	1-13/32	55 to 65	1-1/16	110 to 120
	18204-36 (inner)	1-15/32	1-1/4	25 to 35	29/32 *	70 to 80
1952 and 1953 45 Side Valve (K Model)	18201-52	2-15/32	2-7/32	47 to 57	1-7/8	120 to 130
1954 and later 55 Side Valve (KH Model)	18200-32	2-15/64	1-15/16	53 to 63	1-19/32	120 to 130

\* Set spring tester table at 1", then turn counterclockwise an additional 3/32" which is 1-1/2 turns of the table.

#### Recommendation:

Used valve spring testing 5 pounds or more below low limit poundage shown in table should be replaced with a new spring.

HARLEY-DAVIDSON MOTOR CO.  
Milwaukee 1, Wisconsin, U.S.A.