NAPA BALKAMP *Rebuilt Starter Drives*

CROSS REFERENCE OF AMERICAN-BOSCH, INGERSOLL-RAND, BENDIX-WESTINGHOUSE, SCHWITZER, LUCAS AND VOLKSWAGEN STARTER DRIVE NUMBERS TO BALKAMP

AMERICAN-BOSCH	OUR NO.	INGERSOLL-RAND	OUR NO.	BENDIX-WESTINGHOUSE	OUR NO.	SCHWITZER	OUR NO.	LUCAS	OUR NO.	VOLKSWAGEN	OUR NO.
DV202720-1	3-172	5BM-299-1	3-165	236915	3-175	126605	3-175	250843	3-401	11391135-A (ALGT 34LIZ)	3-402
		5BM-299-2	3-153	236925	3-174	126606	3-198	291484	3-404		
		5BM-299-4	3-164	237009	3-198	136419	3-175	54254043	3-403	11191135-B (ALGT 30LIZ)	3-400
		9BM-299-3	3-174			138091	3-174				
		9BM-299-7	3-175							111911335-A (ALGT-34LIZ)	3-402
		9BM-299-8	3-198								
		10BMP-299-1	3-293								
		10BM-299-21	3-175								
		10BM-299-22	3-174								

CROSS REFERENCE OF LUCAS PINION AND SLEEVE ASSEMBLIES TO BALKAMP

LUCAS	OUR NO.	LUCAS	OUR NO.	LUCAS	OUR NO.
250698	3-621	291101	3-623	291562	3-624

SPRING ASSEMBLY DATA

PLEASE NOTE: BALKAMP clutch and barrel type drives are supplied as complete assemblies (excepting 3-526). Screw type drives are normally supplied as the shaft assembly only. When replacing the drive, remove the spring, head and bolts then reassembly on the BALKAMP DRIVE. This effects an important savings for you.

If the spring should be distorted, broken or the parts mislaid, the following spring assembly guide will be useful in replacing the necessary parts. ALWAYS compare the parts to be replaced with the new parts since some drives have more than one spring and head application.



BALKAMP DRIVE NO.	BALKAMP SPRING NO	BALKAMP SHAFT BOLT NO.	BALKAMP HEAD BOLT NO.	BALKAMP LOCK WASHER NO.
3-103	3-602	3-613	3-614	3-615
3-107	3-603	3-613	3-614	3-615
3-114	3-604	3-610	3-617	3-615
3-118	3-602	3-613	3-614	3-615
3-119	3-600	-----	-----	-----
*3-121	3-602	3-613	3-614	3-615
3-123	3-602	3-613	3-614	3-615
3-131	3-602	3-613	3-614	3-615
**3-135	3-603	3-613	3-614	3-615
**3-137	3-603	3-613	3-614	3-615
3-141	3-601	-----	-----	-----
**3-144	3-603	3-613	3-614	3-615
3-145	3-601	-----	-----	-----
3-146	3-603	3-613	3-614	3-615
3-149	3-603	3-613	3-614	3-615
3-153	3-609	3-611	3-618	3-615
3-157	3-605	-----	-----	3-615
3-526	3-606	3-612	3-617	3-615

* Check the Old Spring, You May Require Spring #3-607.

** Check the Old Spring, You May Require Spring #3-608.

RATCHET TYPE BARREL DRIVES

Figure (1) illustrates the new Ratchet barrel type drive. This new drive is the equipment drive for various cars and trucks since 1953. It is designed to overcome false starts by having a locking pin (detent) arrangement. This spring loaded pin holds the drive pinion in the flywheel ring gear until a pre-determined engine speed is reached.

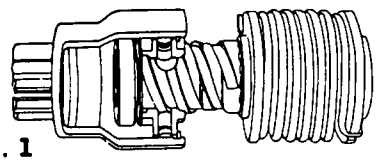


FIG. 1

This improved drive is not necessarily intended as a replacement for the standard barrel type drive which has proved highly successful on most applications for many years. Rather, it is designed as a supplement on those vehicles which have a tendency to be hard starting in extreme cold or under difficult operating conditions.

We recommend that the 1951-55 Studebaker Commander drive be replaced with the proper Ratchet unit (3-565). Also, it is recommended that the International 110 thru 160 Series with Starter Motor No. 1107074, 1107134, 1108021, 1108131-50, be replaced with 3-565. Each of these vehicles give more satisfactory service with the Ratchet drive.

The standard barrel drive normally interchanges perfectly with the Ratchet type excepting in extremely difficult operation conditions.