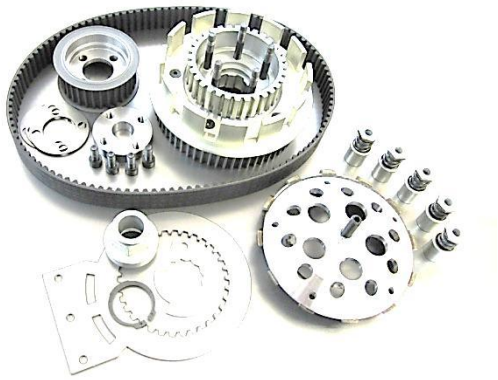
Installation instructions

Primarydrive for
HD WL 45 cu.in. models 1941-up

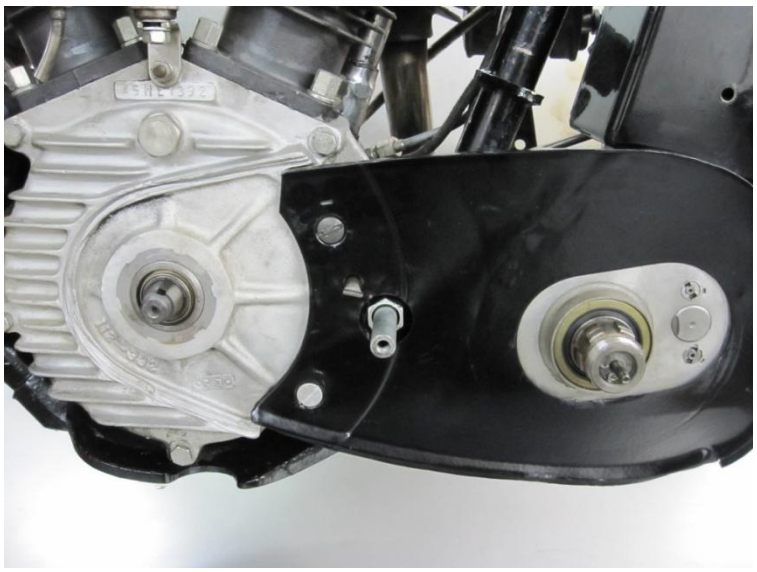
Hauptstrasse 20-1
74360 Ilsfeld / Germany
Tel: +49 (0)7062 676135
Fax: +49 (0)7062 676136
mail@hmb-motors.de
www.hmb-motors.de



Read instructions thoroughly and carefully before starting with any work.

Safety rules:
Follow all existing safety rules concerning working on automotive vehicles.
This instruction is intended for qualified mechanics. Many details are not described as it is assumed that these are known by such persons.
Contact HMB or a qualified workshop with any questions you have or if problems occur during installation.

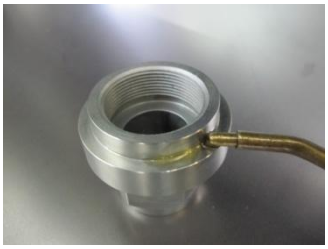
Step 1:
Remove any parts to reach the initial state shown in picture.
Clean maindrive gear of transmission and sprocket shaft of engine thoroughly.
The primary chain oilingsystem must be put out of service.



Step 2:

Check if nut of clutchhub runs without drag on threads of maindrive gear until it bottoms out at splines.

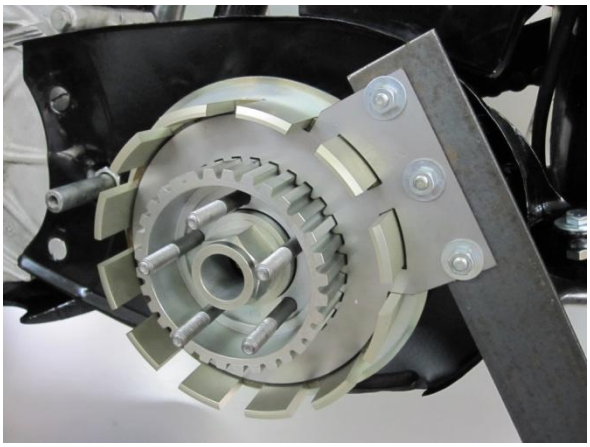
Install clutch assembly on maindrive gear.
Apply some oil on threads and contact surface of nut (big diameter) and tighten nut slightly.
Check if clutch basket turns free without any contact to inner primary cover. There should be a minimum gap of 1 mm (0.04 in.) between these parts.



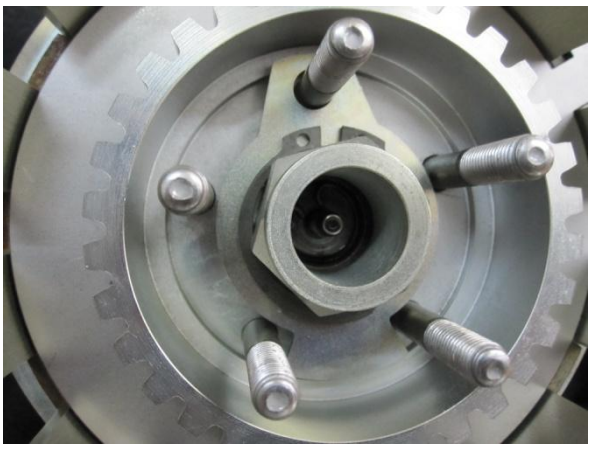
Step 3:

Temporarily install one friction disc into clutch basket and insert the backing tool as shown.
Caution: The backing tool must be in a perpendicular position to axis of maindrive gear while tightening the clutchhub nut. For this, seat tool fully against friction disc and clutch basket.

Tighten clutchhub nut to 150 Nm (110 ft lb).

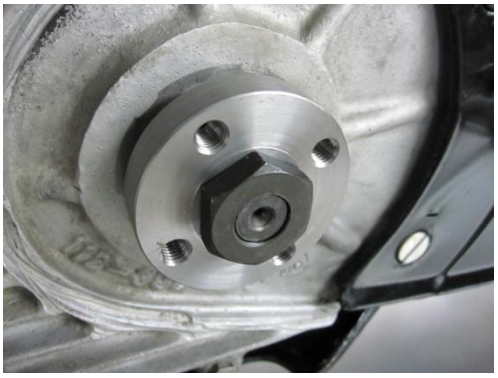


The locking plate provides 5 different mounting possibilities. By simply turning it, you get another five possibilities.
Find out the appropriate position, insert locking plate and secure with retaining ring.



Step 4:
Information:
The engine pulley is attached to the crankshaft by use of an adaptor. The correct axial position of the pulley is obtained through a certain amount of shims.

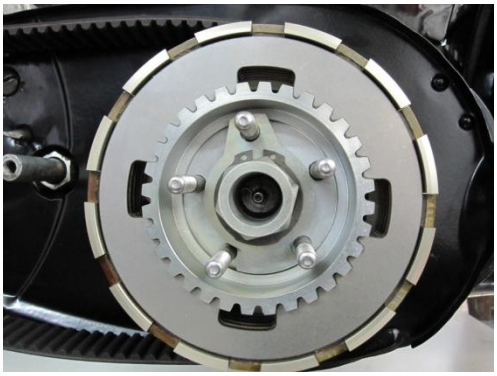
Slip the adaptor on the crankshaft and check if taper is fully seated. If key in crankshaft is too high, taper won´t seat fully and you have to cut key to specification.
Tighten crankshaft nut now.



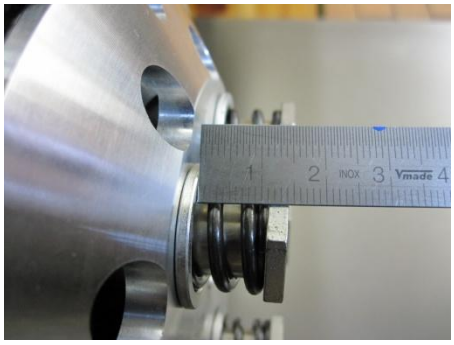
The position of the engine pulley should be as close as possible to the crankcase.
Gently press crankshaft into crankcase until it bottoms against the pinionshaft bearing. Slip engine pulley over adaptor and check for binding. Use shims between adaptor and engine pulley to locate pulley approximate 1 mm (0.04 in.) away from crankcase.

Lay belt over pulleys and slip engine pulley and the determined amount of shims over the adaptor.
Tighten the four socket screws only slightly at this moment. Tightening to 20 Nm (15 ft lb) combined with the use of a medium strength threadlocker can be done after the installation of the clutch. Rear brake may be applied then to prevent the engine pulley from turning.

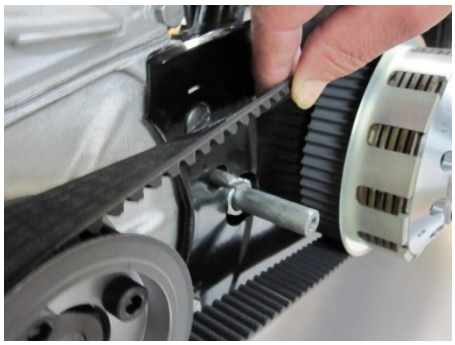
Step 5:
Apply a thin coat of engine oil (i.e. SAE 10W-40) on both sides of the friction discs. A few drops of oil are enough per disc, do not soak them in oil !
Install 5 friction- and 5 steel discs into the clutch basket, starting with a friction disc. Last one is a steel disc, see picture. Steel discs have four slots for venting, all of them should have the slots aligned so they form a venting channel.



Install the pressure plate and insert spring retainers, springs and nuts.
The distance from end of nut to shoulder of retainer should be 14 mm (0.55 in.) for a standard application.
For racing applications the spring preload can be raised as required.



Tension of belt:
Allow about 10 mm (0.4 in.) vertical travel of belt at center between pulleys when pushed without significant force.
Torsion of belt at the same location should be possible then at about 45 degrees°.
Again check belt tension after the 3 transmission case nuts have been tightened.
Tighten the 4 socket screws of the engine pulley now to 20 Nm (15 ft lb) using a medium strength threadlocker.



Temporarily attach all external parts that are necessary to get the clutch pulled. Leave the primary cover out.
Insert the hardened ball into the adjusting screw using some grease to prevent ball from falling out.
Adjust screw so pushrod has some clearance and tighten nut.
Pull clutch and check travel of pressureplate. Maximum travel should be as shown in picture (pressurplate ist just coming out of the clutch basket).
If pressureplate travels further, add a stop to the clutch lever or allow more clearance for pushrod.

Finally attach the primary cover and check for free running of all parts.
Keep the primary case well vented to prevent overheating of clutch. This can be done by moving out the inspection covers, i.e. by adding collars with a thickness of about 5 mm (0.2 in.) between inspection covers and primary cover.
The belt is not resistant against gasoline and limited resistant against oil, avoid contact of these fluids to belt.