Eleventh day fast gear box repair tools

A fast gear box kit (TZ-FL00)

Fast gear box kit is supporting tools for dismantling the gearbox are necessary, including: 1, one shaft nut plate hand (TZ-FL01)

Fast gear box shaft locking nut is on the edge of 70 mm hexagonal nut, in repairs need to be removed, install the nut, need special spanners. Such as figure 1a.

When in use, first of all, at the same time, the two files are hung together, or other means are used to fix the gear box in a shaft.Through a shaft, with the sleeve head removed or screwed a shaft nut, as shown in Figure 1b..

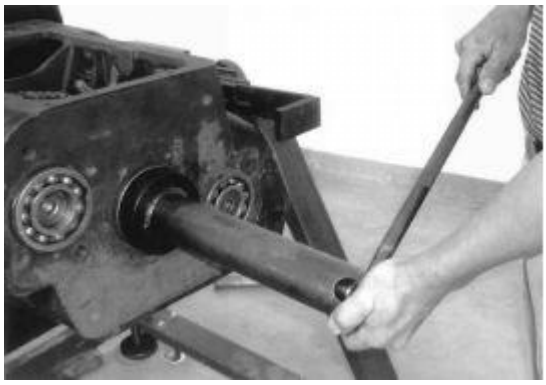

Figure 1A a shaft nut

Figure 1b hand with a shaft nut, nut A shaft nut is the reverse screw thread, should be paid attention to when assembling and assembling.

2, the main box counter shaft front bearing puller (TZ-FL02)

In the disintegration of the gearbox or replace main box counter shaft front bearing 370309Y, the bearing is set aside, this time must use the main box counter shaft front bearing puller, such as figure 2A.

In the dis assembly of main box counter shaft front bearing, first with a copper percussion main gearbox shell before the end, the outward movement of a bearing with the card.

Spring clamps the card to take the ring off. As shown in Figure 2B, will be set aside for the anterior ring slot card set in the bearing of the card slot ring in. Tighten the allocated screw device can be smoothly to the bearing set aside. The dial out a full range of transmission box general.

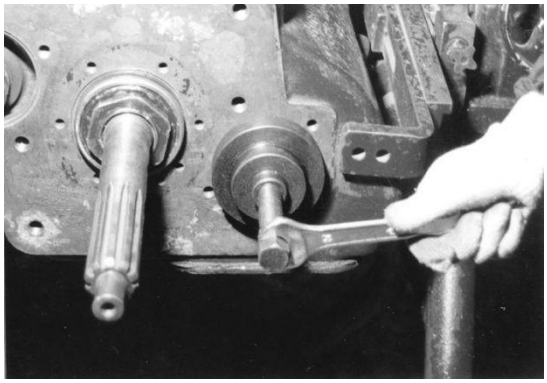

Figure 2A the main box counter shaft front bearing puller

Figure 2B with puller removing main Counter shaft front bearing box

3, the auxiliary box counter shaft front bearing puller (TZ-FL03)

With the disintegration of the auxiliary box Fast gear box, in the side box assembly and after the separation of the main box,, the auxiliary gearbox two root counter shaft front bearing dis assembly. Due to the inner ring of the bearing in the auxiliary box counter shaft, therefore in the dis assembly of the bearing must use special extractor as shown in figure 3a. First, it will set aside a device body is obliquely into the bearing, as shown in Figure 3B, then subject is placed, as shown in Figure 3C. Then set aside for inner ring is screwed into the body, as Fig. at this time, extractor is quite a bearing inner ring and the bearing are fixed into a whole. Finally, the reverse shaft set aside whirling unit into the main body of the main rod, the backward impact puller hammer can smoothly will dial bearing.RT11509; 7JS; 8JS; 9JS series gearbox auxiliary box counter shaft front bearing types for 42307E, and 12JS and 16JS series gearbox auxiliary box counter shaft front bearing types for 42308E. So they can not be universal, we in the special tool to the two sets.

Figure 3A side box counter shaft front bearing puller

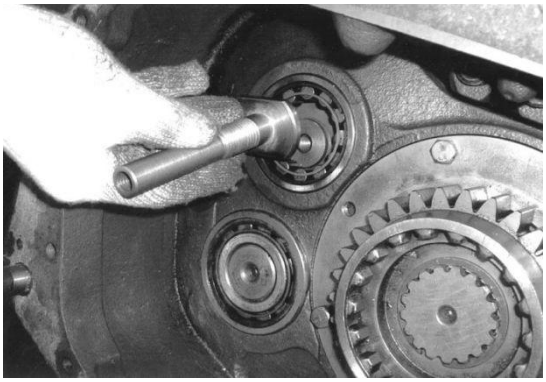

Figure 3B placing the dial in the bearing

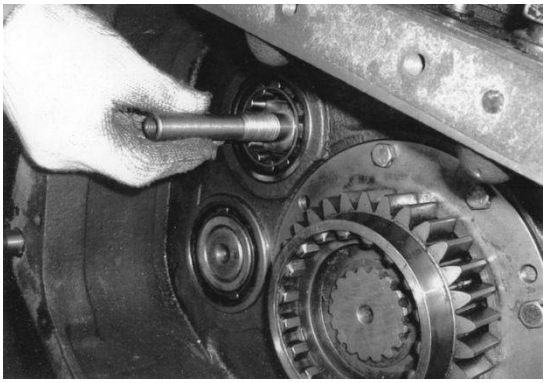

Figure 3C will dial out the main body of the device

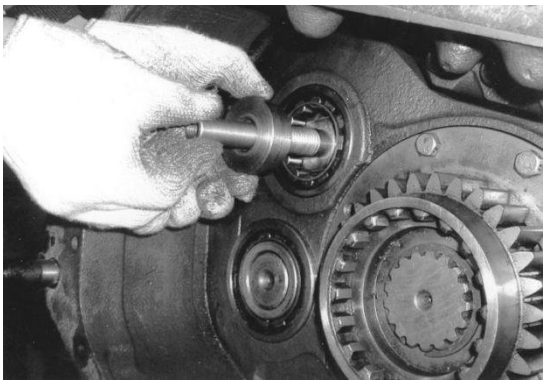

Figure 3D the dial out of the inner ring of the bearing

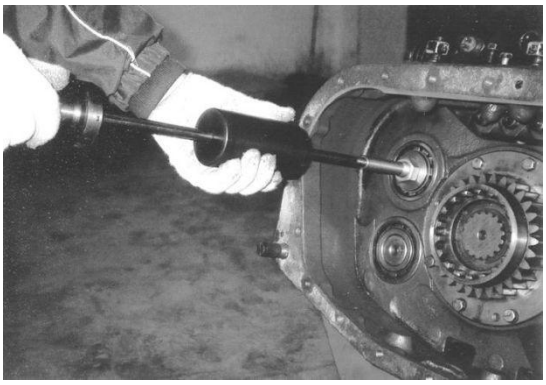

Figure 3E with reverse shaft puller bearing will dial out

4, the auxiliary box hanger (TZ-FL04)

When the separation of the main and auxiliary gearbox assembly, it is best to use auxiliary box hanger, such as figure 4a. In removing vice box assembly. First of all, the vice box shell and main box casing connection bolts disassembled and then use the crowbar to the sub tank shell to leveraging a little, vice box hanger with two bolt fixed in the middle position of the auxiliary box top shell, as shown in Figure 4b, crane hanger hanging prison. Finally with a crowbar will vice box and the main box separation.

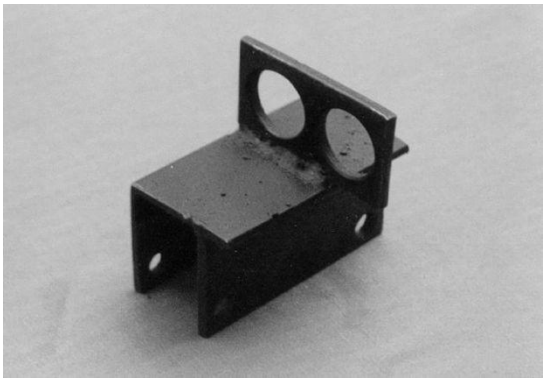

Figure 4A side box hanger

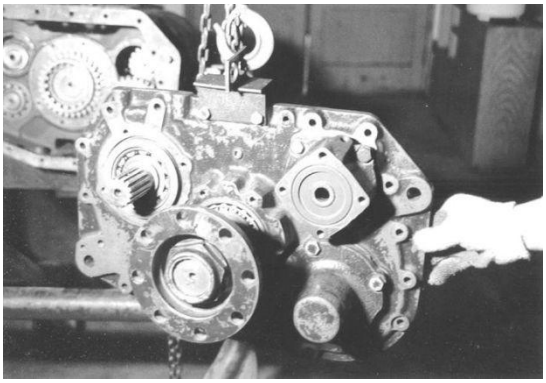

Figure 4B auxiliary box hanger, lifting, lifting side box assembly

In the installation of the auxiliary box assembly, with vice box hanger will be divided into sub tank assembly lifting a position parallel to the main box, in order to ensure the auxiliary box two counter shaft front end is inserted into the sub tank pay shaft front bearing case, vice box and the main box buckle. This tool series gearbox general.

5, after removing the counter shaft bearing sub fiber (TZ-FL05)

As shown in Figure 5a, Fast box tool kit set a reverse gear shifting shaft device, hit bearing fiber and flange nut sleeve of the slide bar, slick combination. The combination of a total of six parts, including: a slide rod and slippery; fiber head and tail fiber; punching hammer and a handle.

In Figure 5b, the fiber head and tail fiber and the slide bar are assembled together to constitute fiber. After removing the counter shaft bearing in use, use the hand to hold.Towing mast, fiber head alignment shaft bearing inner ring and outer ring, with Lang hitting the head of fiber tail can dismantle the bearing. This tool all series of gear box general.

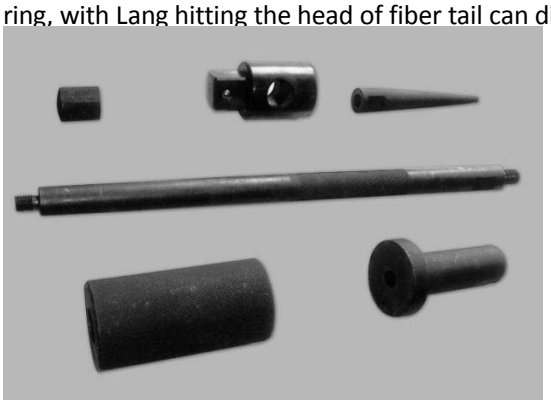

Figure 5A tool combination

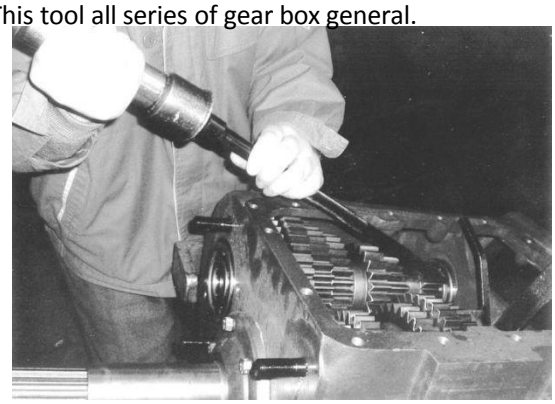

Figure 5B uses a fiber disassembling counter shaft bearing

6, reverse shaft puller (TZ-FL06)

As shown in Figure 6A will slip to the bar and set aside for connection of the handle assembly, punching hammer into the slide bar, that is, the composition of the reverse gear shaft puller. Fast gear box has two reverse shaft. To remove the reverse gear, you must remove reverse shaft. The first auxiliary gearbox assembly, and the separation of the main box. Extractor will vice box counter shaft front bearing is disassembled and then. Finally, as shown in Figure 6B, reverse gear shaft set aside for 12 mm screw into the reverse gear shaft, with hammer backward punching will smooth the reverse shaft set aside. This tool is a full range of variable welve Speed box general.

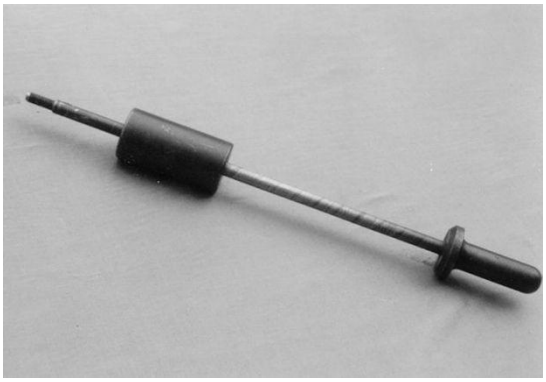

Figure 6A reverse shaft puller

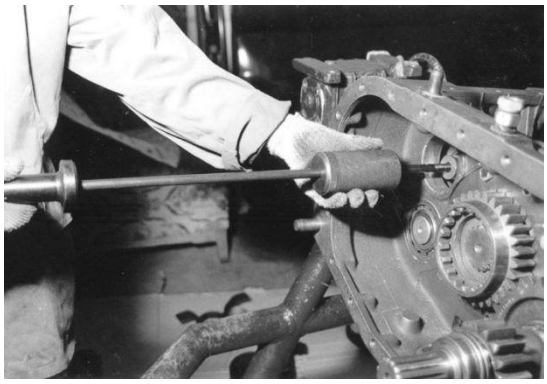

Figure 6B with reverse shaft puller removing reverse shaft

7, the hook head positioning sleeve extractor (TZ-FL07)

In order to drive shaft with accurate location, Fast gear box output flange in the flange hole is provided with a positioning sleeve. Positioning sleeve, there are two: A is old-fashioned with two M6 mm screw hole of the positioning sleeve. The set of available conventional roof the dial out. Because the positioning sleeve has been eliminated, so this set of tools is not set, if necessary can be a separate order. New positioning sleeve must use special hook head set aside to successfully allocate, such as figure 7a.

Figure 7a hook head positioning sleeve puller

Figure 7b with the dial out of the set will be set aside as shown in figure 7b,

Will hook head positioning sleeve tilt into the positioning hole, until the entire hook placement head, then set aside straighten the device, the puller hook just stuck in the positioning sleeve buckle. Reverse shaft set aside; the front end of the M12 mm screw into the dial is, hammer backward impact will successfully positioning set aside. This tool series gearbox general.

8, install the positioning ring awl (TZ-FL08)

In second shaft (output) shaft assembly of the gears in the process, the positioning ring is rotated by an angle. It is necessary to use special awl, such as figure 8a. after installation of the gears positioning sleeve, with special awl to push the positioning sleeve to rotate an angle to the position of the positioning key. This tool series gearbox general.

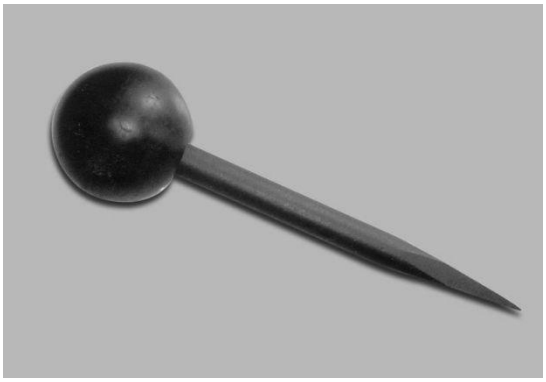

Figure 8A positioning ring awl

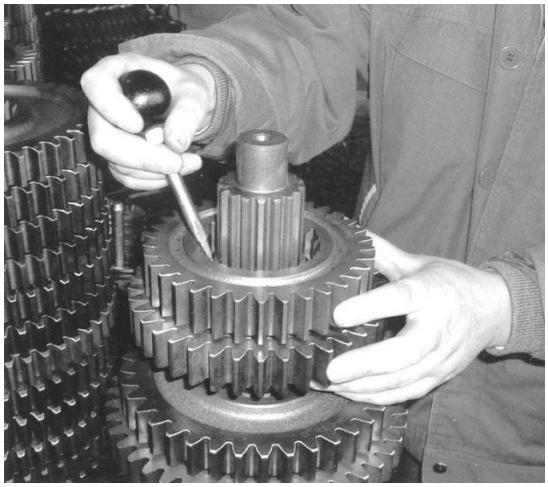

Figure 8b with an awl locating ring rotation angle

9, collar nut sleeve (TZ-FL09)

Flange nut general with a larger torque will flange fixed on the output shaft of the gearbox, due to the smaller hole flange positioning. Therefore, demolition, flanged nut must use special strong sleeve, as shown in Figure 9A. As shown in Figure 9b. First of all, the sleeve is sheathed on the flange nut, and a slide bar, slick and the reinforcing bar is removed or installed. The flange nut also available gas dynamic plate hand (commonly known as jackhammers) to remove installed.

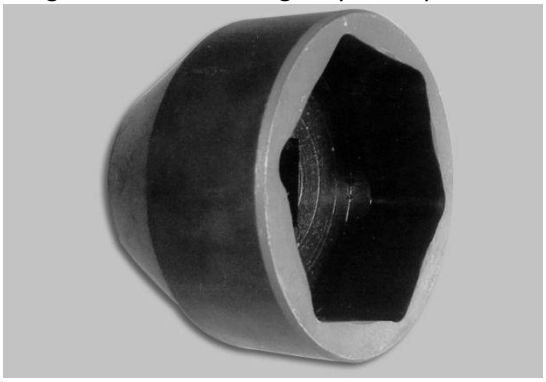

Figure 9A collar nut sleeve

Figure 9b removable collar nuts with a special sleeve

Because the collar nut is locked in a large torque before leaving the factory, the use of manpower is often necessary.

Reinforcing bar, and very laborious. Due to the limitation of space position, in the vehicle assembly flange nut is more difficult. Flange nut labour saving wrench (TZ-FL13), as shown in Figure 9C. Is is composed of a bracket, increasing torque converter composed. Torquer is a 1:5 torque converter. When in use. First of all, the flange nut sleeve is sheathed on the flange nut, then the bracket with two tall flange bolt is fixed on the flange. Will increase the torque converter output end is inserted into the flange nut sleeve and the rack in, the sliding rod and slippery or ratchet plate hand and force rod can be easily will remove nut, as shown in Figure 9 days.

This set of labor saving in hands for phi 165 to 180 dia range of different specifications of the flange and end tooth flange. Replacement of different specifications of the sleeve head, also can be for a variety of driving bridge input flange nut dis assembly. This set of tools series gearbox general. Fast gear box kit does not contain this set of labor saving in hand, if necessary, separate orders.

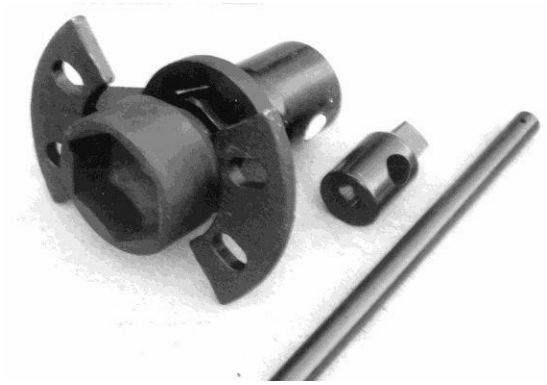

Figure 9C flange nut

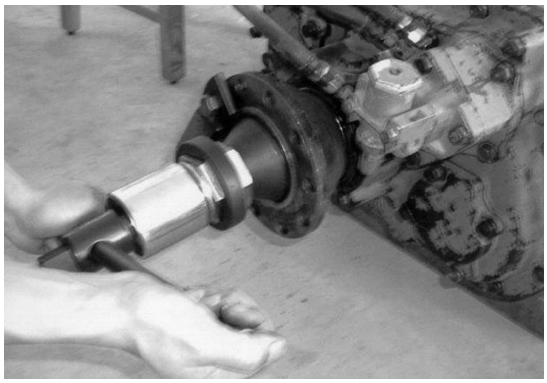

Figure 9D hand in hand with the labor board, installed flange

10, second shaft assembly mould (TZ-FL10) in the maintenance for assembling shaft assembly, need to be equipped with a second shaft assembly fixture, such as figure 10a. second shaft assembly mould by mould body and a park magnet.

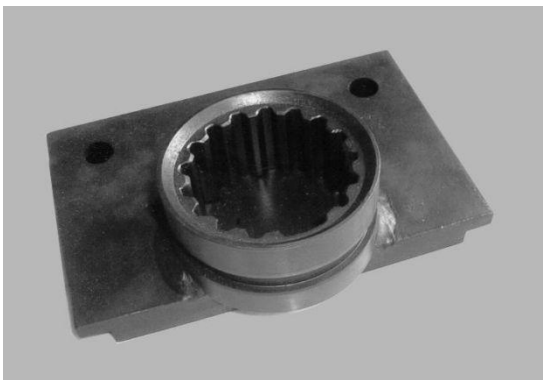

Figure 10A two shaft assembly mould

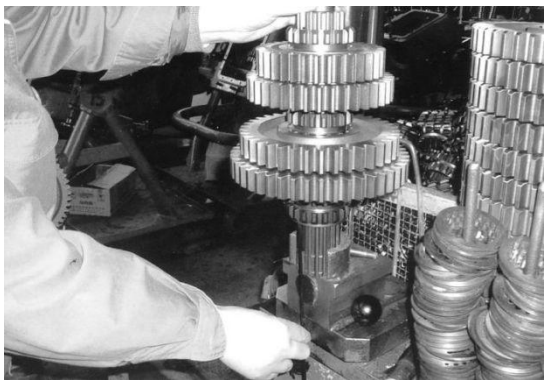

Figure 10B using the model two shaft assembly

When assembling, first mould body with fixed on the working table or Bench Vise fixed on the two then bolts.
The second output shaft end toward the insertion of positioner neutral position. In accordance with the order of assembly of the gear profile and the corresponding gap adjusting shim and a positioning gasket. Each installing a spacer, will pass key to move to the corresponding position, position of key made to place on the end surface of the mould of the circular magnetic ironclad, until the completion of the all gear assembly. This tool series gearbox general.
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Two, the auxiliary box counter shaft bearing puller

In not the disintegration of gearbox case, remove the replacing the vice box pay shaft bearing (310). First of all, the bearing positioning circlip removed, and then tapping the gearbox with a copper rod rear end, the bearing outward flee to move a little, then, will be set aside a device of ring groove card set in bearing card spring slot in. Tighten puller bolt, can be bearings for smooth set aside. In general use, such as the tool of figure 11b. all series of gear box.

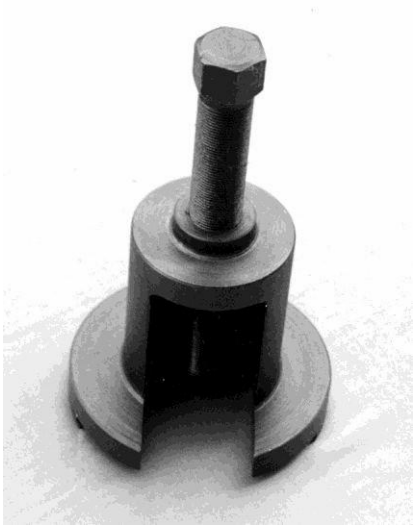


Figure 11a auxiliary box counter shaft bearing puller

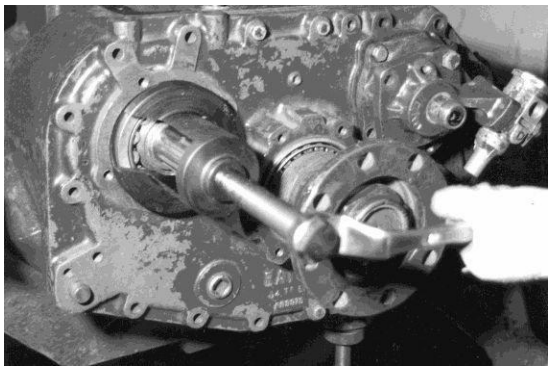


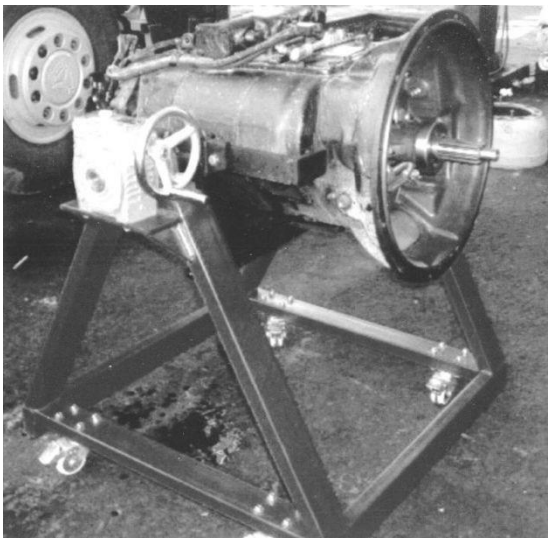
Figure 11b with puller pulling side box counters haft bearing

Three, fast gear box dis assembly turning frame (TZ-G02)

Prepared by the gearbox in assembly, dis assembly and maintenance, the need for a 360 degree rotating worktable, which is flip dismantle frame. Figure 12b Fast box special overturning frame. The gear box oil drain screw dis assembly, lifting to flip the frame. The overturning frame supporting screw is screwed into the gearbox oil drain plug screw and the screw cap lock tight. Screw on both sides of the positioning plate of knob. On both sides of the positioning plate bending plate tightly pulled gearbox shell front end, then pull plate locking. So the gearbox is firmly fixed on the turning rack for flip dismantle. This machine series gearbox general.

Four, transmission hydraulic support vehicle (TZ-G03)

Under the heavy duty automobile gearbox tend to have a beam (commonly known as the second). Therefore without the aid of tools, it is difficult to gearbox assembly removed from the vehicle, if you want to the gearbox assembly is fitted to the car up, it is much more difficult. (to replace clutch friction plate is not easy. Motorcycle hydraulic gearbox is to solve this problem and settings. Figure 13a is transmission hydraulic car care.



Special Fast Flip box frame box with fast dis assembly graph 12b

As shown in Figure 13b, hydraulic car is composed of a frame, plate, an oil cylinder, an oil pump. Pump transposition lever to "lift" position when, dynamic pressure pump rod, cylinder will lift the plate, the maximum lifting height of 0.8 meters. Supporting plate angle can be adjusted. When in use, firstly, the pallet lift to a certain height, then from the beam and the gearbox bottom gap is inserted into, the rotating rod on both sides can be the plate angle adjustment to the angle and the

angle at the bottom of the gearbox, pressure driven pump rod the supporting plate close to the speed changing box at the bottom of the, the gearbox boosting. Demolition of clutch shell and the engine is connected with a screw box, the occasional car in conjunction with the gearbox together pull out to the rear, can be the demolition of the gearbox down. If you need to replace the clutch wipe, to be friction plate after the replacement, the occasional car in conjunction with the gearbox push that assembly.

Figure 13A gearbox hydraulic support vehicle

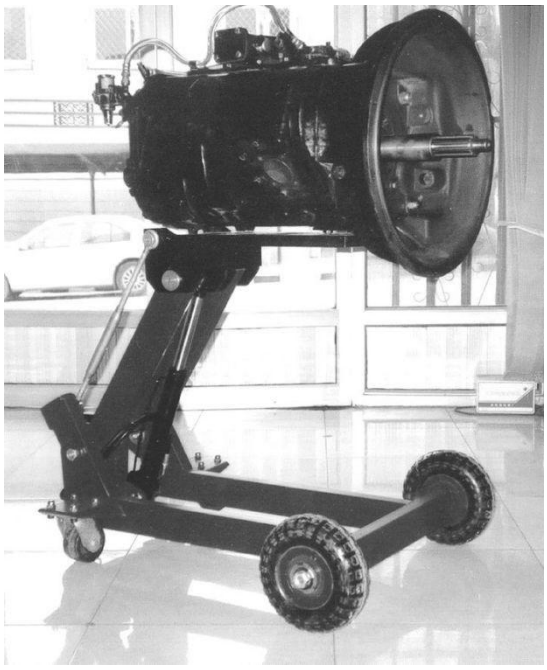


Figure 13b gearbox hydraulic support car if you need to repair gearbox,

Can be transposed pump lever dial to "down" position, the dynamic pressure pump rod, plate and then decreases. Gearbox along with the occasional car can be dragged from the bottom of the vehicle. If the lower chassis, available Jack the front axle from the top of a height, gearbox can be from the bottom of the car smoothly pulled out. The machine tool can be used to the full range of gearbox.