Jaguar IT5 5 Speed Installation Manual for XK120 - XK150

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JT5 Conversion Notes

Thank you for purchasing this custom World Class JT5 transmission designed for the Jaguar XK120-150 platform. These transmissions are assembled with higher quality control standards and closer tolorancing than factory built Borg Warner T5's. Medatronics Corporation's Autodyne division has been involved in the T5 program since 1983. We welcome any comments or suggestions you may have on our products. Support can be reached via email, telephone or our web site.

Since these transmissions are designed for the Jaguar platform they will make JT5 conversions easy and cost effective. If you are using this gearbox in an XK140-150 crossmember mounting is not required. If you are using this in an XK120, modifications for clearance to the frame crossmember will have to be done.

Most people are modifying existing manual shift bell housings to accept the JT5. If you decide to use an adapter plate you will have to specify a longer input shaft or extend your crankshaft pilot bushing, otherwise the factory bushing will work fine. We can supply longer input shafts on certain models to correct for up to 3/4" of back movement. The shifter, and cross member mounts are within range to compensate for 1/2" movement as well. Here are some useful measurements:

<u>Measurement Location</u>	<u>Jaguar</u>	<u>JT 5</u>
Front mounting face to end of tail housing	17.375"	24.125"
Front mounting face to transmission mount C/L	13"	14.5"
Front mounting face to shifter C/L	21"	19.5"
Front mounting face to end of input shaft	7"	7"
Input shaft pilot bushing diameter	.492"	.492"

If using our adapter plate: JT5 measurements increase by .625"

JT5 Mounting

After modifying a bell housing or creating an adapter plate. A simple steel plate is all that is required to extend the transmission mount pad back to meet the factory mount location. On the XK120 people are welding a plate to the frame then using a standard FORD Mustang transmission mount. The XK140 and XK150 do not require a mount. Care must be taken that the gearbox does not hit the frame in these areas.



Shifter Mounting

The shifter stub supplied allows for bolting of a bracket that can have a factory stick welded to it. You may have to remove some insulation and trim the factory rubber boot in this area. Use RTV sealant on the shifter body when bolting it to the tail housing.

Speedometer Installation

A cable is supplied to adapt the JT5 to your Jaguar speedometer. Route the cable away from all exhaust pipes and avoid sharp bends.

Drive shaft Installation

The slip yoke supplied with the JT5 utilizes what is called a standard Spicer 13-10 U-Joint configuration. Once the transmission is installed in the vehicle insert the slip yoke and bottom it out in the transmission and pull it back 3/4 of an inch. Measure the center to center distance of the U-Joints from the slip yoke to the flange on the rear axle. Have a solid tube driveshaft made locally using these new measurements. Typical measurement is 26.75" center to center of U-Joints. This figure is for non adapter plate installations. Subtract the thickness of the adapter plate from the common 26.75" length.

Lubrication

We recommend DEXTRON II or III oils. Do not use conventional 80w-90w gear lube. Use of any gear lube will ruin the synchro rings and cause lubrication problems.

Backup Light Switch

The JT5 comes with an integral back up light switch. An adapter harness is supplied to make the hook up easy.

Service Parts

We stock a complete line of OEM service parts. We also carry rebuild kits for these transmissions that include all bearings, blocking rings, seals, sealant, small parts, and shim packs.

Important Clutch Notes

XK120-150 cars use a 10" diameter clutch. A 10" diameter clutch disc must be used with a 10 spline 1 1/16" dia. or 23 spline 1" dia hub. This depends on what input shaft your JT5 is supplied with. We have custom clutch discs made that have the same width as Jaguar discs and come with performance facings. We recommend using our discs but aftermarket 10" discs can be used from most clutch manufacturers that have these dimensions. Check that your clutch splines allow for enough free movement when the transmission is installed.

The JT5 is fully synchronized in all 5 forward gears. It has a non synchronized reverse gear. All mainshaft gears are on needle bearings and all blocking rings except for 5th gear are of fiber composition with a dual cone design on 1 st and 2nd gear. The weight of a typical JT5 is 80 lbs.. These gear sets are rated at 330 Ft. Lbs. static torque.

Popular JT5 Gear Ratios	Jaguar 4 Speed Ratios
1st 2nd 3rd 4th 5th 3.35 1.99 1.33 1.00 .73 .40 .33 .24 .27	1st 2nd 3rd 4th 3.37 1.86 1.28 1.00 .45 .31 .22 (percentage drop)
2.95 1.94 1.34 1.00 .73 .34 .30 .25 .27 Other overdrive ratios available	2.94 1.90 1.39 1.00 .35 .27 .28 (percentage drop)

All ratios also available with .80 Overdrive Other JT5 Products

Heavy Duty Billet Shifter.

Rebuild Kit (includes all wearable parts).

Heavy Duty 10" clutch disc.

Custom billet shift knobs and handles.

Thank you for choosing Medatronics and the JT5!

Serial Number	Model Number