# Jaguar $JT_5$ **5** Speed Installation Manual for Mark II Sedan

Medatronics Corporation 1717 Avenida Del Sol Boca Raton, Florida 33432

Phone: 561 447-9594 Fax: 561 995-9234 Email: support@5speeds.com WebSite: http://www.5speeds.com

# **JT5** Conversion Notes

**Thank you** for purchasing this custom World Class JT5 transmission designed for the Jaguar Mark II platform. These transmissions are based on the Borg Warner T5 platform. They are assembled with higher quality control standards and closer tolorancing than factory built units. Since these transmissions are designed for the Jaguar platform they will make Mark II conversions easy and cost effective. They are designed to bring the shifter, transmission mount, and speedometer fitting, within a reasonable mounting range for various kit designers as well as give your customer a transmission that requires no or little modifications to the floor. Converting to JT5 allows for cheaper replacement parts and longer parts availability.

#### **Overall Installation Procedure**

Most people are purchasing our new adapter bellhousing or modifying existing manual shift bell housings to accept the JT5. Once the transmission is bolted to the bellhousing you install it on the engine using all factory clutch and linkage parts. Transmission tunnel and interior console must be removed. Trimming to the tunnel sides and floor is required to get the wider transmission up high enough to make the correct fit. You use our clutch disc in place of the factory unit. Our 5 speed input shaft length and pilot diameter are the same measurement as Jaguar. Once installed on the engine bolt our crossmember and rubber mount to the transmission. Jack it up against the floor and drill the new crossmember mounting holes. Check floorpan and tunnel clearances during this process. Shims are supplied to compensate for variations in floor heights. Slide the driveshaft yoke in the transmission and push it in till stopping and out 3/4 of an inch. Make a new SOLID driveshaft using the length from center to center of each universal joint. Hook up speedometer adapter to cable and backup up light switch wires. Fill with Dextron III oil. From the topside install the new shifter. Refit tunnel and the console. Any old insulation and rubber boots should be moved and check that nothing will prevent full shifter movement.

<u>Measurement Location</u>	<u>Jaguar</u>	<u>JT5</u>
Front mounting face to end of tail housing	18"	24.5"
Front mounting face to speedometer C/L	16.75"	17.5"
Front mounting face to transmission mount C/L	17.875"	16"
Front mounting face to shifter C/L	12"	11.5"
Front mounting face to end of input shaft	7"	7"
Input shaft pilot bushing diameter	.492"	.492"

#### JT5 Mounting

We prefer our complete crossmember assembly for the Mark II which relocates the mounting area to create a better and stronger installation.

The JT5 Shift Pattern R

#### Shifter Mounting

The shifter stub supplied allows for direct welding of the factory stick or welding of a bracket to accept the factory stick. Our adapter shifter w/ stick does this. JT5 shifter knobs and sticks are also available.

#### Speedometer Cable Installation

The JT5 speedo gear set can be calibrated to match any rear end gear. The fitting supplied can must be re machined to accept the Jaguar right angle gear drive thread. You will also have to grind the square drive to fit into the JT5 speedo gear. The other alternative is to purchase our right angle adapter that solves this problem. The choice is yours.

#### Drive shaft Installation

The slip yoke supplied with the JT5 utilizes a standard 13-10 Spicer universal joint. Making a drive shaft with this yoke is an advantage because you make a solid shaft with no slip spline. Calculate the drive shaft length by pushing the slip yoke in the JT5 until it stops and pull it out 3/4". Measure the distance from yoke and rear axle universal joint center lines to determine the length of the drive shaft. You install the JT5 by slipping it on to the shaft in the tunnel rather than trying to bolt flanges together. Average driveshaft center to center U-Joint lengths are 43.5".

#### Crossmember Notes

While supporting the engine and transmission with a jack or other device bolt the rubber mount supplied to the transmission then bolt th crossmember to the mount. Jack the transmission up until the crossmember hits the floor. Drill holes thru the floor so that you can bolt the crossmember to the floor with the bolts and plates supplied. You can shim the crossmember lower if you feel it is necessary.

#### 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.

#### Important Clutch Notes

Mark II transmissions are supplied with 9.5" clutch discs using a 1" diameter by 23 spline hub or a 1 1/16 diameter 10 spline hub.

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 1st and 2nd gear. The weight of a JT5 is 75 lbs. These gear sets are rated at 330 Ft. Lbs. static torque.

### Gear Ratio Comparison Chart

Popular JT5 Gear Ratios St				tandard Jaguar 4 Speed Ratios					
1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	OD
3.35	1.99	1.33	1.00	.73	3.37	1.86	1.28	1.00	.78
.40	.33	.24	.27		.45	.31	.22	(percent	age drop)
2.95	1.94	1.34	1.00	.80	2.94	1.90	1.39	1.00	
.34	.30	.25	.20		.35	.27	.28	(percent	age drop)
Other	overdriv	e ratios d	available						

#### **Other JT5 Products**

Heavy Duty Billet Shifter. Rebuild Kit ( includes all wearable parts). Heavy Duty 10" clutch disc. Custom shift knobs and handles.

# JT5 for the 6 Cylinder E Type

Medatronics also manufactures a JT5 for 6 cylinder E Type Jaguars. This 5 speed incorporates the same features as the above transmission but is shorter to fit the 6 cylinder floor. We have noticed that the majority of 5 speed conversion kits require extensive floor modifications. Ours does not. Because this transmission is very short, an electronic speedometer conversion is necessary.

## Thank you for choosing Medatronics and the JT5!

Serial Number

Model Number