

# Parts and tools for Fiesta ST 6MT transmission rebuild

Version 1.0

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Part Description	Part Number	Callout (Ford)	Qty needed	Cost ea	Comments
<b>TRANSMISSION CASE</b>					
Stud	W716677-S442	HT1	1	\$7.83	Bought this b/c mine was damaged during removal
Trans case bolt	W500311-S437		16	\$4.35	Must be replaced. Lists as "Knock sensor bolt". Double-check the quantity. I purchased some from eBay in a closeout sale. 4x bolts per bag.
Permatex® Anaerobic Gasket Maker	51813		1	\$12.06	OEM spec is Ford Gasket Maker / TA-16 (WSK-M2G348-A5) which you can get on Amazon. I used the Permatex.
<b>OUTPUT SHAFT</b>					
Funnel	AV6Z-7L276-A	7L276	1	\$1.65	
Bearing Retaining ring	AV6Z-7065-B	7A043B	1	\$0.82	
Bearing	DV6Z-7065-A	7A043A	1	\$51.09	
Bearing kit	AV6Z-7L149-A	7L149	1	\$68.37	Includes parts for both input & output shaft; new bearings, screws, output shaft seal, etc. Only need to order one of these. I purchased from Varsity Ford, Ann Arbor, MI.
Gear - Mainshaft 2nd Speed	AV6Z-7102-A	7M162	1	\$68.25	Need to replace if removed. Note that both arrived with gray surface corrosion/oxidation. Was told it is normal. It came off with a brass brush.
Gear - 6th Speed	AV6Z-7J101-A	7M164	1	\$60.20	Replaced because it was damaged during removal.
Gear - Countershaft 4th Speed	AV6Z-7112-A	7112	1	\$146.38	Replaced because it was damaged during removal.
Bearing Assy - Needle, 1st Gear	AV6Z-7M037-B	7M037	1	\$13.63	
Snap Ring , 1st & 2nd Gear	AV6Z-00817-A	7A046B	1	\$62.78	Manual requires this be replaced. Discontinued Part. I chose not to replace. Other dealerships may have it. Prices range from \$62-95
<b>SECONDARY OUTPUT SHAFT 2</b>					
Bearing	AV6Z-7025-B	7025B	1	\$32.59	This bearing was listed as discontinued. I was able to source it from a Cavalier Ford, Chesapeake, VA. Call around, ask which dealerships have it in stock and reach out to them.
Bearing	AV6Z-7025-A	7025A	1	\$8.92	
Needle bearing	AV6Z-7M037-A	7M037	1	\$11.24	
<b>INPUT SHAFT</b>					
Bearing	AV6Z-7065-A	7A043	1	\$92.62	This bearing was on long-term backorder with Ford. All suppliers I spoke with saw zero in stock in the USA. I did many, many hours of research and found F-582061-INA available overseas via 123Bearing.com.
Bearing Retaining ring	AV6Z-7065-C	7A046C	1	\$1.96	
Screw	AV6Z-00812-A	HS1	6	\$2.42	Only purchase this if you do not purchase the output shaft bearing kit (above). 6 screws needed in total for both output & input shaft.
Seal Assembly - Oil	AV6Z-7048-A	7048	1	\$4.64	Only purchase this if you do not purchase the output shaft bearing kit (above).
Bearing Assy - Needle, 3rd Gear	AV6Z-7M037-C	7M037	1	\$11.91	
Snap ring	AV6Z-00817-E	7A046E	1	\$87.86	Manual requires this be replaced. I chose not to due to cost.
<b>SHIFT FORKS</b>					
Bushing	98WZ-7335-A	7335	2	\$5.96	
<b>SHIFT SELECTOR</b>					
Bearing	AV6Z-7K306-A	7K306	1	\$4.69	
Vent Assembly	CV6Z-7L282-A	7L282	1	\$14.48	I ordered this b/c I broke mine during removal.
<b>DIFFERENTIAL</b>					
Bearing assembly	96WZ-4220-AA	7K306	2	\$46.31	This bearing was on long-term backorder with Ford. All suppliers I spoke with saw zero in stock in the USA. I did many hours of research and found LM29749-LM29711-TIMKEN available overseas via 123Bearing.com.
Seal assembly - oil	CV6Z-1S177-A	7052	2	\$14.47	
Shim					VARIES - you will have to determine the diff end float using OEM procedure in manual. Only then will you know proper shim size.
<b>CLUTCH &amp; FLYWHEEL</b>					
Clutch and Pressure Plate Assembly	C1BZ-7B546-J		1	\$97.93	Includes clutch & pressure plate.
Dual mass flywheel	C1BZ-6477-B		1	\$341.15	
Bolt	AV6Z-6379-A		6	\$10.43	Flywheel bolts.
Slave Cylinder	DG9Z-7A564-B		1	\$29.35	Throwout bearing is built into this.
<b>EXHAUST</b>					
Front Muffler Gasket	2S6Z-9450-A		1	\$3.84	Used during installation, if exhaust is separated.
<b>SUSPENSION &amp; STEERING</b>					
Arm Assembly - Front Suspension	C1BZ-3078-A		1	\$75.84	Passenger side. Only replace if necessary.
Arm Assembly - Front Suspension	C1BZ-3079-A		1	\$75.84	Driver side. Only replace if necessary.

Bolt (lower control arm)	W709618-S442		2	\$1.56	Must replace these if removed.
Nut - Hex (lower control arm)	W520203-S442		2	\$1.56	Must replace these if removed.
Nut (steering knuckle)	W520204-S442	HN1	2	\$1.45	Must replace these if removed.
Bolt (steering shaft, inside car)	AY1Z-3R827-A	HB2	1	\$4.59	Must replace these if removed.
Nut (Stabilizer drop link)	W715135-S440	HN1	2	\$2.90	Must replace these if removed.
Subframe long bolt - Bolt And Washer Assembly - Hex.Head	W714404-S442	HB1	2	\$5.22	Must replace these if removed.
Subframe short bolt - Bolt And Washer Assembly - Hex.Head	W714343-S900	HB2	2	\$3.77	Must replace these if removed.
Passenger side axle bearing retainer nut	W520102-S442	HN1	2	\$0.29	Must replace these if removed. I chose not to.
<b>OTHER NECESSARY PARTS, TOOLS &amp; FLUIDS</b>					
<a href="#">Motorcraft® Dual Clutch Transmission Fluid</a>	XT-11-QDC		2	\$34.51	Will need 1.6 qt to refill transmission. Plan on buying another 2qt to refill again after 500 mile break-in. (WSS-M2C200-D2)
Brake fluid			1		You will need a bit of whatever brake fluid you have in your car (I use Motul RBF-600) to bleed the clutch. About a pint.
<a href="#">Dial indicator gauge</a>			1	\$40.00	Will need a clamp for the base.
<a href="#">Silicone Brake Caliper Grease and Dielectric Compound</a>	XG-3-A		1	\$15.48	I used 3M 08946 Silicone Paste. Ford spec: (ESE-M1C171-A)
<a href="#">Brake power bleeder</a>			1	\$48.90	You will need a power bleeder (pressurized) to properly bleed the clutch system. Will also need tubing and fittings.
<a href="#">12t Hydraulic press</a>			1	\$129.99	Hydraulic press is needed to press on and off the various bearings. <b>For the output shaft gears, visit a shop that is capable; I recommend at least a 20 ton press, oxy-acetelene torch and large bearing separator. This is key!</b>
<a href="#">Bearing Separator And Puller Set</a>			1	\$49.99	Kit used to separate several bearings and gears from shafts.
<a href="#">3-jaw puller set</a>			1	\$19.99	Kit used to pull various bearings from shafts
<a href="#">Blind hole pilot bearing gear puller slide hammer set</a>			1	\$30.98	Kit used to pull various bearings from case. Measure and order a kit that has all of the sizes needed.
<a href="#">Flywheel/crankshaft/steering wheel pulling set</a>			1	\$26.95	Kit needed to remove upper bearings from both shafts
<a href="#">Snap ring pliers; angled</a>			1	\$21.64	To remove snap rings.
<a href="#">Snap ring pliers; straight</a>			1	\$20.21	To remove snap rings.
<a href="#">Pistol pump oiler</a>			1	\$12.10	Used to deploy oil to shafts and bearings during assembly
<a href="#">Heat gun</a>			1	\$15.00	Needed during installation and removal of bearings
<a href="#">Torque wrench; medium</a>			1	\$26.00	I'd recommend a medium and large.
<a href="#">Torque wrench; large</a>			1	\$57.00	I'd recommend a medium and large.
<a href="#">Powerful Impact gun</a>			1	\$197.00	The bigger the better for removing input & output shaft top bolt. Note output shaft bolt is reverse thread
Impact gun hex bits			1		For removing input & output shaft top bolts.
Steel pipe for installing gears on output shaft			1		A short length of steel pipe, about 5-6", and as close of an inside diameter as possible to the output shaft. I got a piece of a roll cage from a friend that was perfect.
<a href="#">Grease - chassis lubrication</a>	XG-11		1	\$19.72	Used during installation. Spec: WSS-M1C267-A1. Purchased from Ford dealer in tube. <b>NOTE - if you need some, let me know; I will send you the 1/2 teaspoon you need! Seriously.</b>
<a href="#">Axle bushing/bearing/race/seal driver installer</a>			1	\$25.89	Used to insall bearing races and oil seals
<a href="#">Vise jaw protectors</a>			1	\$8.71	Need these for holding shafts in vise.
<a href="#">Ford OTC Rotunda 308-847 B6 Transmission Input Shaft Seal Installer</a>			1	\$16.10	Found this on eBay, used.
<a href="#">Ford OTC Rotunda 308-849 B6 Transmission Shift Shaft Installer Fusion</a>			1	\$7.10	Highly recommend this tool. Found this on eBay, used.
<a href="#">Rotunda 205-115 Ford FN Transmission Pinion Seal Installer</a>			1	\$24.98	Found this on eBay, used.
<a href="#">Rotunda 308-880 Installer, Driveshaft Seal</a>			1	\$83.67	Find on eBay. I did not purchase this.
<a href="#">307-680 Table, Assembly (DPS6)</a>			1	\$300.00	DO NOT NEED this, but it is recommended. Can find on eBay.
<a href="#">307-003 (T57L-500-B) Holding Fixture, Transmission</a>			1	\$125.00	DO NOT NEED this, but it is recommended. Can find on eBay or similar 3rd party devices.
Steel plates for pressing duties					Use various 1/4" steel bar stock to help pressing bearings and sleeves.
<a href="#">303-1502 Lifting Device Engine</a>			1	\$67.00	Need one of these. A friend fabricated one for me from some steel, drilled holes and some screws that fit. Can probably find one on eBay.
<a href="#">Engine support bar</a>			1	\$79.99	This works fine.
<a href="#">Transmission Jack</a>			1	\$99.99	This works fine.
<a href="#">Digital Laser Infrared Thermometer Temperature Gun</a>			1	\$15.99	Any temp gun works.