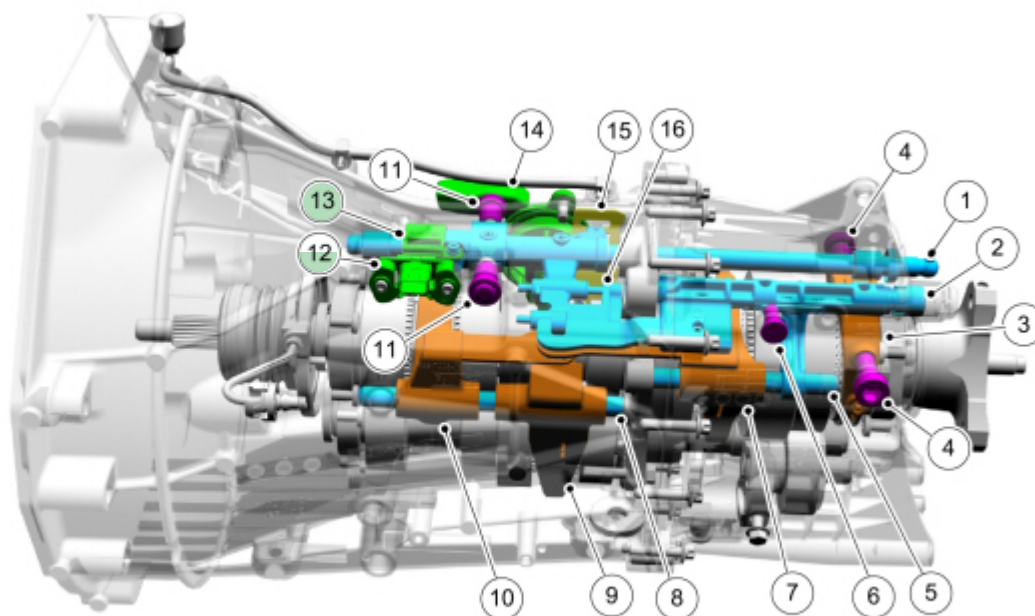


Component Description

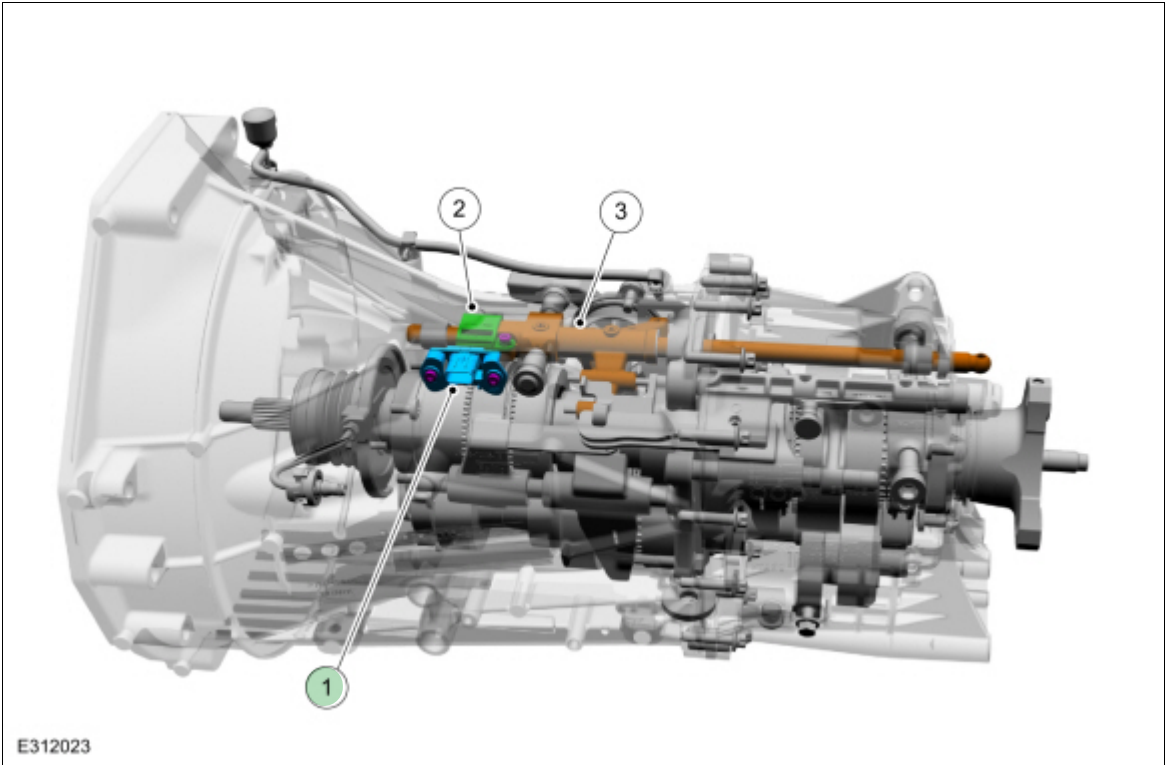
Internal Gearshift Mechanism (Vehicles equipped with an 5.0L engine)



E311658

Item	Description
1	Shift shaft assembly
2	Reverse shift rail
3	Reverse shift fork
4	Shift fork pivot bolts
5	1st/2nd shift rail
6	Reverse shift rail detent
7	1st/2nd shift fork
8	3rd/4th and 5th/6th shift rail
9	5th/6th shift fork
10	3rd/4th shift fork
11	Shift shaft assembly detents
12	Neutral position sensor (Gear shift position sensor)
13	Neutral position sensor (Gear shift position sensor) magnet
14	Shift shaft assembly dampener
15	Shift shaft gate
16	Shift fork guide

Neutral Position Sensor / Gear Shift Position Sensor (Vehicles equipped with an 5.0L engine)

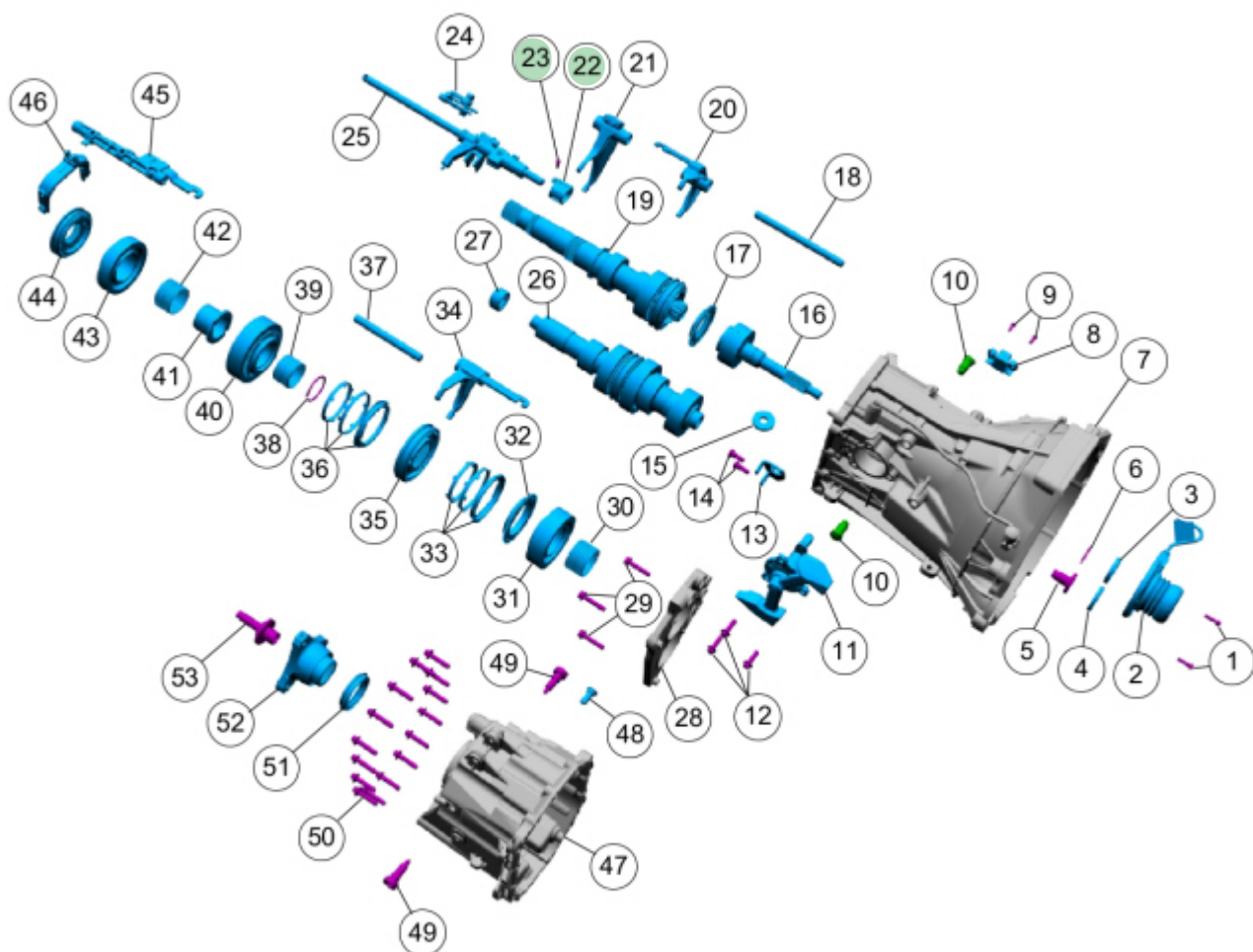


Item	Description
1	Neutral position sensor (Gear shift position sensor)
2	Neutral position sensor (Gear shift position sensor) magnet
3	Shift shaft assembly

The transmission neutral position sensor is bolted to the transmission housing and detects the position of a magnet mounted on the gear selector shaft. The neutral position sensor provides 3 PWM (pulse width modulation) output signals. The TR_NEUTRAL_RAW and TR_NTRL_RAW2 signals both indicate the gear selector shaft axial position and if the selected gear is odd, even, or neutral. The two separate signals provide redundancy to ensure safe detection of the gear engagement status. The GEAR_SHIFT_C_DC signal indicates shaft rotation and which shift fork is selected. The PCM (Power Control Module) interprets these signals to determine the selected gear. The PCM PID GEARPOS_MAN indicates the selected gear as NEUTRAL, 1, 2, 3, 4, 5, 6, or 7(for Reverse). As a rationality check, the PCM compares the selected gear detected to the calculated transmission gear ratio using vehicle and engine speed when the clutch pedal is fully released. The sensor data is used for several vehicle features and functions including rev matching, reverse camera activation, reverse parking aid, hill start assist, and reverse lamps.

To achieve the required accuracy for the safe operation of these features the sensors need to be programmed to the characteristics of each individual magnet on the gear selector shaft. Once programmed, it is not possible to reprogram or otherwise adjust a sensor. The sensor and magnet must always be installed together as a matched pair.

Transmission Exploded View (Vehicles equipped with an 5.0L engine)

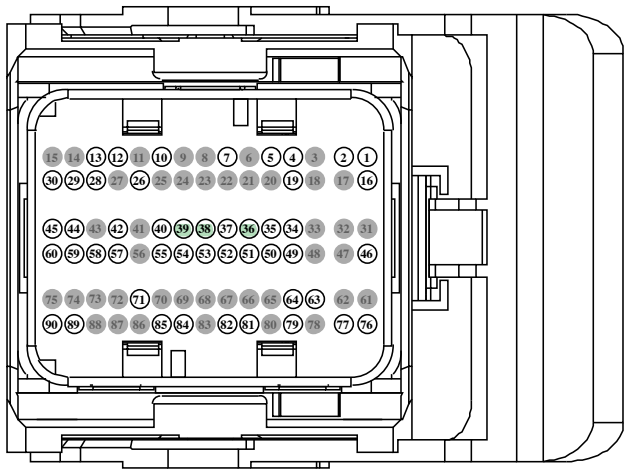


E311657

Item	Description
1	Clutch slave cylinder bolt (2 required)
2	Clutch slave cylinder
3	Input shaft seal
4	Countershaft bolt cover
5	Countershaft bolt
6	Input shaft snap ring
7	Front transmission case assembly
8	Neutral position sensor (Gear shift position sensor)
9	Neutral position sensor (Gear shift position sensor) screws (2 required)
10	Shift shaft detents (2 required)
11	Shift shaft dampener

12	Shift shaft dampener bolts (3 required)
13	Shift shaft gate
14	Shift shaft gate bolts (2 required)
15	Magnet
16	Input shaft
17	4th gear synchronizer cone
18	3rd/4th 5th/6th shift fork rail
19	Output shaft
20	3rd/4th shift fork
21	5th/6th shift fork
22	Neutral position sensor (Gear shift position sensor) magnet
23	Neutral position sensor (Gear shift position sensor) magnet screw
24	Shift fork pivot
25	shift shaft assembly
26	Counter shaft
27	Center support bearing (countershaft)
28	Center support
29	Center support bolts (3 required)
30	2nd gear bearing
31	2nd gear
32	2nd gear synchronizer cone
33	2nd gear synchronizer ring assembly
34	1st/2nd shift fork
35	1st/2nd gear synchronizer assembly
36	1st gear synchronizer ring assembly
37	1st/2nd shift rail
38	1st/2nd gear synchronizer assembly circlip
39	1st gear needle bearing
40	1st gear
41	Reverse gear needle bearing race
42	Reverse gear needle bearing
43	Reverse gear
44	Reverse gear synchronizer assembly
45	Reverse shift rail
46	Reverse shift fork
47	Rear transmission case assembly
48	Reverse shift rail detent
49	Reverse shift fork pivot bolts (2 required)
50	Transmission case bolts
51	Output shaft seal

Connector:	Description	Color	Harness	Base Part #	Service Pigtail
C175T	POWERTRAIN CONTROL MODULE (PCM)		7C078/14B060	part# N/A	Not Available



Terminal Part Number	Service Part Number	Size
BU5T-14474-BC	Not Available	
BU5T-14474-AC	DU2Z-14474-CA	0.64
BU5T-14474-BB	DU2Z-14474-CA	0.64
GU5T-14474-CA	DU2Z-14474-BA	0.64
BU5T-14474-AB	DU2Z-14474-CA	0.64

Pin	Circuit	Gauge	Circuit Function	Qualifier	Terminal Part Number
1	CET49 (BN)	18	CTRL MOD. - POWERTRAIN # TRANSMISSION SOLENOID POWER CONTROL 2 (TSPC2)		GU5T-14474-CA

Pin	Circuit	Gauge	Circuit Function	Qualifier	Terminal Part Number
2	CET25 (BU-GN)	18	CTRL MOD. - POWERTRAIN # TRANSMISSION SOLENOID POWER CONTROL (TSPC)		GU5T-14474-CA
3	*	*	Not Used		N/A
4	CET10 (BU-GY)	20	CTRL MOD. - POWERTRAIN # SOLENOID PRESSURE CONTROL 6 (PC6) [EPC] [VFS]		BU5T-14474-AC
5	CET09 (YE-VT)	20	CTRL MOD. - POWERTRAIN # SOLENOID PRESSURE CONTROL 5 (PC5) [EPC] [VFS]		BU5T-14474-AC
6	*	*	Not Used		N/A
7	RET24 (BN-BU)	20	CTRL MOD. - POWERTRAIN # TRANSMISSION RANGE SIGNAL RETURN (TRGND)		BU5T-14474-AB
8	*	*	Not Used		N/A
9	*	*	Not Used		N/A
10	VE731 (YE-GN)	18	SENSOR - HEATED OXYGEN POST CAT. 1ST OR UNIQUE (HO2S12)		BU5T-14474-BB
11	*	*	Not Used		N/A
12	VE722 (BN)	22	SENSOR - EXHAUST GAS TEMPERATURE 1 (EGT1) (PRE CAT)		BU5T-14474-AB
13	VE788 (BU-WH)	18	SENSOR - PARTICULATE FILTER PRESSURE OUTLET LEFT OR SINGLE (PFP_O)		BU5T-14474-BB
14	*	*	Not Used		N/A
15	*	*	Not Used		N/A
16	CE234 (BU-WH)	18	CTRL MOD. - POWERTRAIN # HEATER OXYGEN SEN. POST CAT. 2ND (HTR22)		GU5T-14474-CA
17	*	*	Not Used		N/A
18	*	*	Not Used		N/A
19	CET05 (BU-GN)	20	CTRL MOD. - POWERTRAIN # SOLENOID PRESSURE CONTROL 1 (PC1) [EPC] [VFS]		BU5T-14474-AC
20	*	*	Not Used		N/A

Pin	Circuit	Gauge	Circuit Function	Qualifier	Terminal Part Number
21	*	*	Not Used		N/A
22	*	*	Not Used		N/A
23	*	*	Not Used		N/A
24	*	*	Not Used		N/A
25	*	*	Not Used		N/A
26	VE733 (WH)	20	SENSOR - HEATED OXYGEN POST CAT. 2ND (HO2S22)	manual transmission	BU5T-14474-BC
26	VE733 (WH)	18	SENSOR - HEATED OXYGEN POST CAT. 2ND (HO2S22)	automatic transmission	BU5T-14474-BB
27	*	*	Not Used		N/A
28	VE723 (GN-VT)	22	SENSOR - EXHAUST GAS TEMPERATURE 2 (EGT2) +	automatic transmission	BU5T-14474-AB
28	VE723 (GN)	22	SENSOR - EXHAUST GAS TEMPERATURE 2 (EGT2) +	manual transmission	BU5T-14474-AC
29	LE450 (WH)	18	CTRL MOD. - POWERTRAIN # UNIVERSAL HEATED OXYGEN PUMPING CURRENT 2ND (UO2SIP-21)		BU5T-14474-BC
30	LE451 (BN-YE)	18	CTRL MOD. - POWERTRAIN # UNIVERSAL HEATED OXYGEN PUMPING CURRENT 1ST (UO2SIP-11)		BU5T-14474-BB
31	*	*	Not Used		N/A
32	*	*	Not Used		N/A
33	*	*	Not Used		N/A
34	CET07 (GY-OG)	20	CTRL MOD. - POWERTRAIN # SOLENOID PRESSURE CONTROL 3 (PC3) [EPC] [VFS]		BU5T-14474-AC
35	LE461 (GY-YE)	20	CTRL MOD. - POWERTRAIN # VOLTAGE REFERENCE TRANSMISSION 2 (T-VREF2)		BU5T-14474-AC
36	VET84 (BN-GN)	20	SENSOR - TRANSMISSION RANGE # PWM OUTPUT 1 (TR-P1)		BU5T-14474-AC
36	LETB2 (BN-GN)	20	SENSOR - SELECTED GEAR (SGS) SHIFT POSITION 1		BU5T-14474-AB

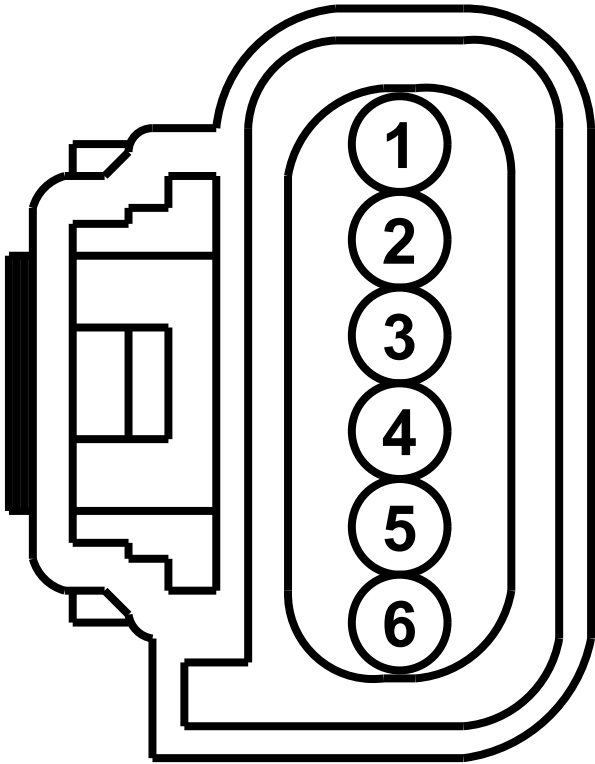
Pin	Circuit	Gauge	Circuit Function	Qualifier	Terminal Part Number
37	VETB0 (YE-VT)	20	SENSOR - INTERMEDIATE SHAFT SPEED A +		BU5T-14474-AC
38	VET33 (WH-OG)	20	SENSOR - TRANSMISSION FLUID TEMPERATURE (TFT)		BU5T-14474-AC
38	LETB3 (GY-BN)	20	SENSOR - SELECTED GEAR (SGS) SHIFT POSITION 2		BU5T-14474-AB
39	LETB4 (GN-WH)	20	SENSOR - SELECTED GEAR (SGS) SHIFT POSITION 3		BU5T-14474-AB
40	VE772 (YE-BU)	22	SENSOR - CLUTCH MASTER CYLINDER 1 (CPP1)		BU5T-14474-AB
41	*	*	Not Used		N/A
42	VET27 (BN-YE)	20	SENSOR - TRANSMISSION FLUID TEMPERATURE (TFT)		BU5T-14474-AC
43	*	*	Not Used		N/A
44	LE448 (GY-BU)	18	CTRL MOD. - POWERTRAIN # VOLTAGE REFERENCE UNIVERSAL HEGO 1ST (UREF-11)		BU5T-14474-BB
45	LE449 (VT-GN)	18	CTRL MOD. - POWERTRAIN # VOLTAGE REFERENCE UNIVERSAL HEGO 2ND (UREF-21)		BU5T-14474-BB
46	CE236 (GY-VT)	18	CTRL MOD. - POWERTRAIN # HEATER OXYGEN SEN. PRE CAT. 2ND (HTR21)		GU5T-14474-CA
47	*	*	Not Used		N/A
48	*	*	Not Used		N/A
49	CET06 (GN-BN)	20	CTRL MOD. - POWERTRAIN # SOLENOID PRESSURE CONTROL 2 (PC2) [EPC] [VFS]		BU5T-14474-AC
50	LE425 (BU-BN)	20	CTRL MOD. - POWERTRAIN # VOLTAGE REFERENCE TRANSMISSION (T-VREF)		BU5T-14474-AC

Pin	Circuit	Gauge	Circuit Function	Qualifier	Terminal Part Number
51	VET26 (BN-GN)	20	SENSOR - OUTPUT SHAFT SPEED (OSS)		BU5T-14474-AC
52	VE915 (BN-GN)	22	VALVE - ACTIVE EXHAUST SOLENOID SINGLE OR LEFT		BU5T-14474-AB
53	VE939 (WH-BU)	22	VALVE - ACTIVE EXHAUST SOLENOID RIGHT		BU5T-14474-AB
54	VETB1 (BN-WH)	20	SENSOR - INTERMEDIATE SHAFT SPEED B +		BU5T-14474-AC
55	VET81 (YE-GY)	20	SENSOR - TRANSMISSION RANGE # PWM OUTPUT 2 (TR-P2)		BU5T-14474-AC
55	VE757 (WH)	22	SENSOR - CLUTCH MASTER CYLINDER 2 (CPP2)		BU5T-14474-AB
56	*	*	Not Used		N/A
57	RE722 (BU-OG)	18	SENSOR - EXHAUST GAS TEMPERATURE 1 (EGT1) (PRE CAT)-		BU5T-14474-BB
58	VE787 (WH-OG)	18	SENSOR - PARTICULATE FILTER PRESSURE OUTLET RIGHT (PFP_O)		BU5T-14474-BB
58	VE787 (WH-OG)	22	SENSOR - PARTICULATE FILTER PRESSURE OUTLET RIGHT (PFP_O)		BU5T-14474-AC
59	VE826 (YE-GN)	18	SENSOR - UNIVERSAL HEATED OXYGEN 1ST OR UNIQUE (UO2SN-11)		BU5T-14474-BB
60	VE827 (WH-GN)	18	SENSOR - UNIVERSAL HEATED OXYGEN 2ND (UO2SN-21)		BU5T-14474-BB
61	*	*	Not Used		N/A
62	*	*	Not Used		N/A
63	CET50 (WH-OG)	20	CTRL MOD. - POWERTRAIN # TRANSMISSION LINE PRESSURE CONTROL (LPC)		BU5T-14474-AC

Pin	Circuit	Gauge	Circuit Function	Qualifier	Terminal Part Number
64	CET08 (BN-WH)	20	CTRL MOD. - POWERTRAIN # SOLENOID PRESSURE CONTROL 4 (PC4) [EPC] [VFS]		BU5T-14474-AC
65	*	*	Not Used		N/A
66	*	*	Not Used		N/A
67	*	*	Not Used		N/A
68	*	*	Not Used		N/A
69	*	*	Not Used		N/A
70	*	*	Not Used		N/A
71	RE723 (WH-BU)	18	SENSOR - EXHAUST GAS TEMPERATURE 2 (EGT2) -		BU5T-14474-BB
72	*	*	Not Used		N/A
73	*	*	Not Used		N/A
74	*	*	Not Used		N/A
75	*	*	Not Used		N/A
76	CE235 (GN-BN)	18	CTRL MOD. - POWERTRAIN # HEATER OXYGEN SEN. PRE CAT. 1ST OR UNIQUE (HTR11)		GU5T-14474-CA
77	CE233 (WH-OG)	18	CTRL MOD. - POWERTRAIN # HEATER OXYGEN SEN. POST CAT. 1ST OR UNIQUE (HTR12)		GU5T-14474-CA
78	*	*	Not Used		N/A
79	CET51 (WH)	20	CTRL MOD. - POWERTRAIN # TRANSMISSION CLUTCH PRESSURE CONTROL (CPC)		BU5T-14474-AC
80	*	*	Not Used		N/A
81	LE424 (YE-GN)	22	CTRL MOD. - POWERTRAIN # VOLTAGE REFERENCE COWL (C-VREF)		BU5T-14474-AB
81	LE424 (YE-GN)	20	CTRL MOD. - POWERTRAIN # VOLTAGE REFERENCE COWL (C-VREF)		BU5T-14474-AB
82	LE456 (VT-WH)	22	CTRL MOD. - SENSOR CLUTCH MASTER CYLINDER +		BU5T-14474-AB
83	*	*	Not Used		N/A
84	RE731 (WH-GN)	18	SENSOR - HEATED OXYGEN POST CAT. 1ST OR UNIQUE (LSF_GND)		BU5T-14474-BC

Pin	Circuit	Gauge	Circuit Function	Qualifier	Terminal Part Number
84	RE731 (BK)	18	SENSOR - HEATED OXYGEN POST CAT. 1ST OR UNIQUE (LSF_GND)		BU5T-14474-BB
85	RE733 (GN)	18	SENSOR - HEATED OXYGEN POST CAT. 2ND (HO2S22)		BU5T-14474-BB
86	*	*	Not Used		N/A
87	*	*	Not Used		N/A
88	*	*	Not Used		N/A
89	CE162 (BU-GN)	22	CTRL MOD. - POWERTRAIN # ACTIVE EXHAUST SOLENOID VALVE		BU5T-14474-AB
90	CE196 (WH-BU)	22	CTRL MOD. - POWERTRAIN # ACTIVE EXHAUST SOLENOID VALVE RIGHT		BU5T-14474-AB
90	CE196 (GY)	22	CTRL MOD. - POWERTRAIN # ACTIVE EXHAUST SOLENOID VALVE RIGHT		BU5T-14474-AB

Connector:	Description	Color	Harness	Base Part #	Service Pigtail
C1854	NEUTRAL POSITION SENSOR		14B060	part# N/A	See Below



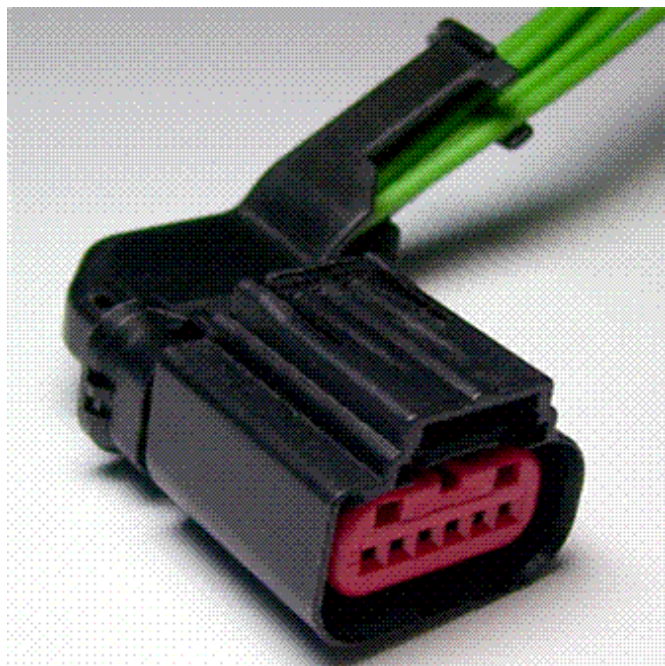
Terminal Part Number	Service Part Number	Size
7S4T-14474-AB	DU2Z-14474-BA	0.64

Pin	Circuit	Gauge	Circuit Function	Qualifier	Terminal Part Number
1	LE424 (YE-GN)	20	CTRL MOD. - POWERTRAIN # VOLTAGE REFERENCE COWL (C-VREF)		7S4T-14474-AB
2	LETB2 (BN-GN)	20	SENSOR - SELECTED GEAR (SGS) SHIFT POSITION 1		7S4T-14474-AB

Pin	Circuit	Gauge	Circuit Function	Qualifier	Terminal Part Number
3	LETB4 (GN-WH)	20	SENSOR - SELECTED GEAR (SGS) SHIFT POSITION 3		7S4T-14474- AB
4	LETB3 (GY-BN)	20	SENSOR - SELECTED GEAR (SGS) SHIFT POSITION 2		7S4T-14474- AB
5	CET47 (BU)	20	SWITCH - REVERSE (RS) - NOT USED		7S4T-14474- AB
6	RET24 (BN-BU)	20	CTRL MOD. - POWERTRAIN # TRANSMISSION RANGE SIGNAL RETURN (TRGND)		7S4T-14474- AB

Available Pigtail Kits

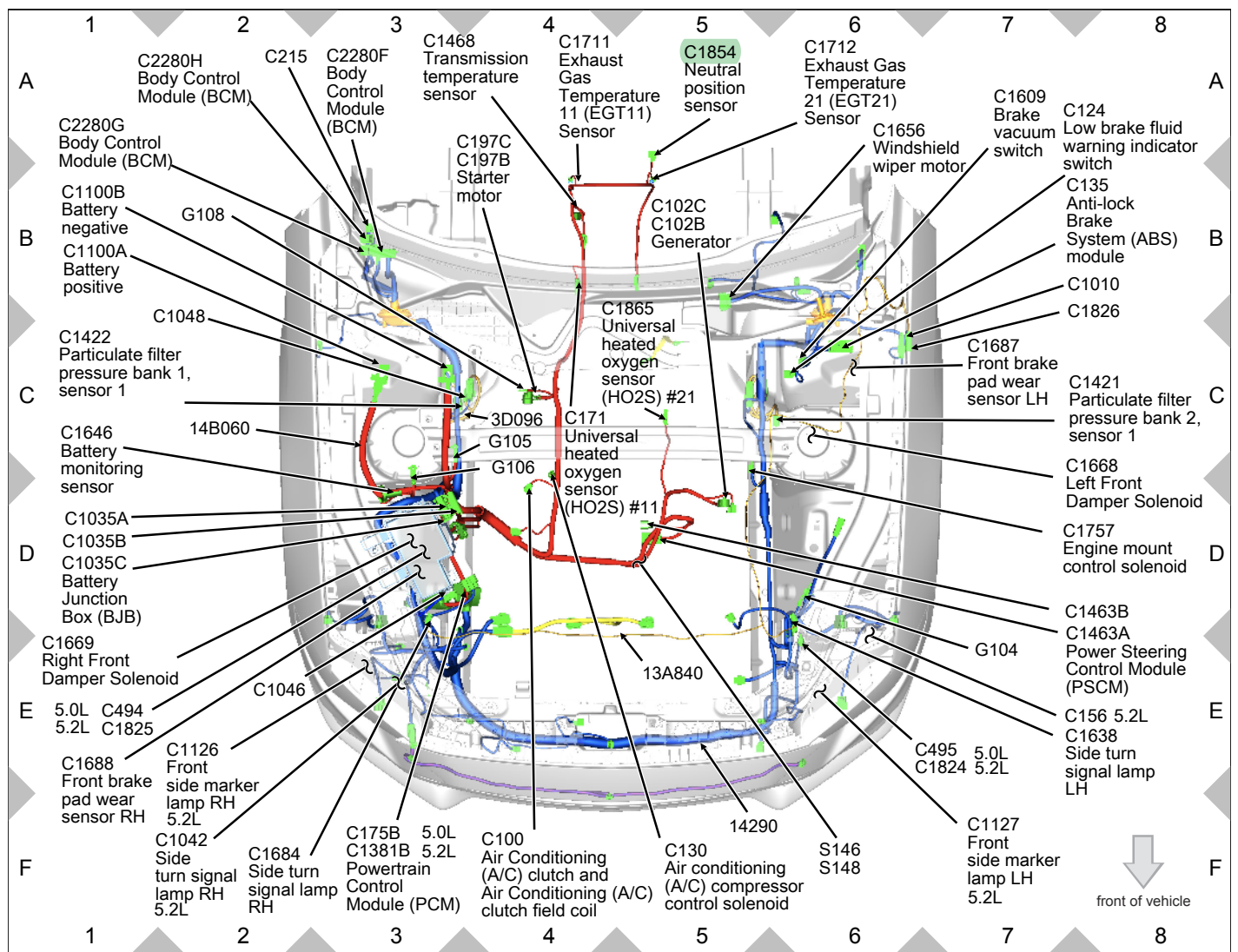
Pigtail Kit Part Number WPT-1241



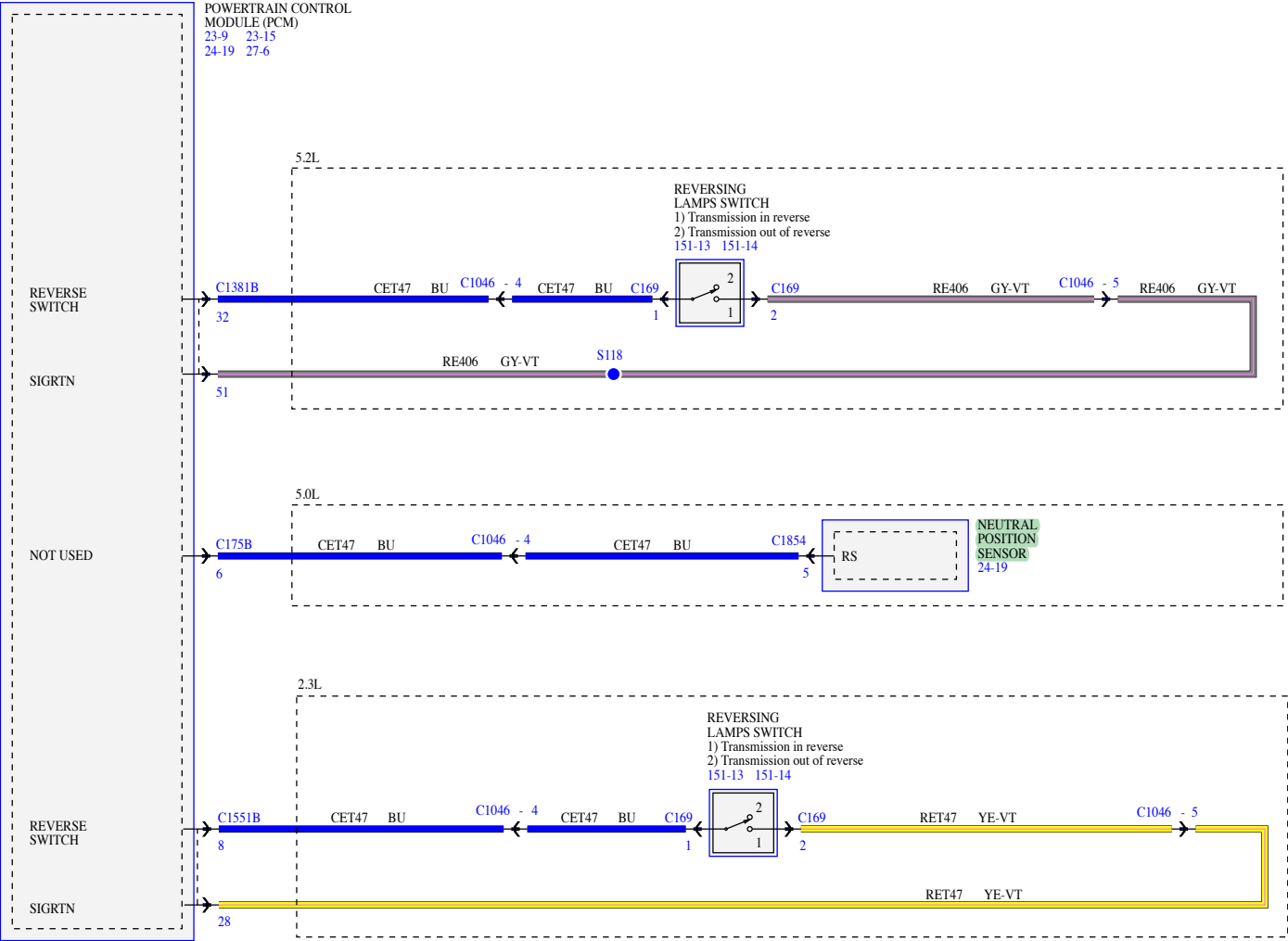
Service Part Number: **3U2Z-14S411-FJAC**
Gauge:**18**
Pin material:**Silver**
Cavities:**6**

Vehicle Uses:

- Control - Electronic Throttle
- Sensor - Mass Air Flow



MANUAL TRANSMISSION



MANUAL TRANSMISSION

