ALBINS SEQUENTIAL SHIFTER

GENERAL NOTES

The Albins Sequential Shifter is specifically designed for AGB transaxles. It features an integral reverse lockout lever and has a position sensor to signal to the ECU on your motor. This can be used to cut or retard the ignition during upshifts.

TECH TIP: AGB transaxles with the latest version gear housing and shift drum can have the reverse lockout cable fitted in two possible locations: 1) the standard position on top of the nosecone or 2) through the side of the gear housing. A different plunger is used for each location, AGBSQ.00387 (top mount – 25mm long), or AGBSQ.13583 (side mount – 40mm long). Both plungers are supplied, allowing the end user to choose the most convenient location. A plug (included) must be installed in the unused lockout port.

MAIN SHIFTER CABLE

1. The Albins Sequential Shifter does not include the main shifter cable. You will have to order a custom length push-pull cable assembly to suit your vehicle. When determining cable length, keep in mind that sharp bends should be avoided. We recommend a Series 4 Felsted Cable with 50.8mm (2") throw, "bulkhead fitting" on one end, and "clamp fitting" on the other end. You should have no problem finding a quality supplier of control cables in your area. If you need help, feel free to give us a call.

2. Once the proper length cable has been obtained, attach the "clamp fitting" end of the cable to the transaxle.

3. Attach the "bulkhead fitting" end of the cable to the shifter.

4. Adjust the bulkhead nuts to position the gearshift lever in the middle of its range of travel. The stops that limit the throw of the shifter are inside the transaxle, and the gearshift lever should never touch the shifter housing cross supports (32) or anything else in the cockpit when shifting in either direction.

REVERSE LOCKOUT CABLE

1. Trim the reverse lockout cable outer housing to 150mm (6") longer than the main shifter cable using a pair of sharp side cutters.

2. Make sure there are no burs where the cable housing was cut, then slide the housing over the cable and push it all the way home on the transaxle.

3. Feed the cable and housing through the angled hole in the gearshift lever. Slide the end cap (17) onto the end of the housing.

4. Trim the inner cable with a pair of sharp side cutters so there is 60mm (2.5") of cable protruding from the cable housing.

5. Screw the cable adjuster (13) fully into the tapped hole in the gearshift lever.

6. Thread the cable through the adjuster and use the washer (18) and screw (19) to clamp the cable securely in the reverse lockout lever (8). Use Loctite 243 Threadlocker to secure the screw.

7. If necessary, take the slack out of the reverse lockout cable using the adjusting screw (13). Do NOT pre-load the lockout cable, as this may lift the reverse lockout plunger out of its notch. If the plunger is not fully home in its notch, the transaxle might be inadvertently shifted into reverse while the car is moving forward.

SHIFT CUT SWITCH

1. Position the wires in the male Deutsch connector plug as shown in Figure 1. The female plug is pre-wired, but if it is removed for some reason, note the wire colors in Figure 2.

2. Test that the proximity sensor is active by moving the trigger plate (4) past the proximity sensor. The LED should light up inside the sensor when it is active. **NOTE:** The output switches to ground when the sensor is triggered.

3. Fine tune the position of the gearshift lever so there is 3mm to 6mm (1/8" to 1/4") travel at the shift knob before the proximity sensor is activated (This is indicated by a LED lighting up inside the sensor).

4. Configure the ECU as appropriate to interface with the switch. The sensor should have a +12V supply. It may be necessary to configure a 'pull-up' resistor for the input channel. The ignition should be set to cut out or retard during the interval that the signal line is grounded. To prevent the ignition cut from re-triggering when the gear lever is moved back to the center position, it is desirable to lock out the signal for approximately 0.5 seconds after the ignition is re-enabled.

FIGURE 1: POSITION OF WIRES IN MALE DEUTSCH CONNECTOR.

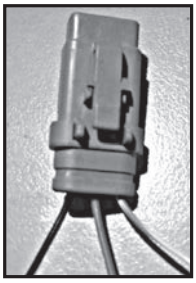
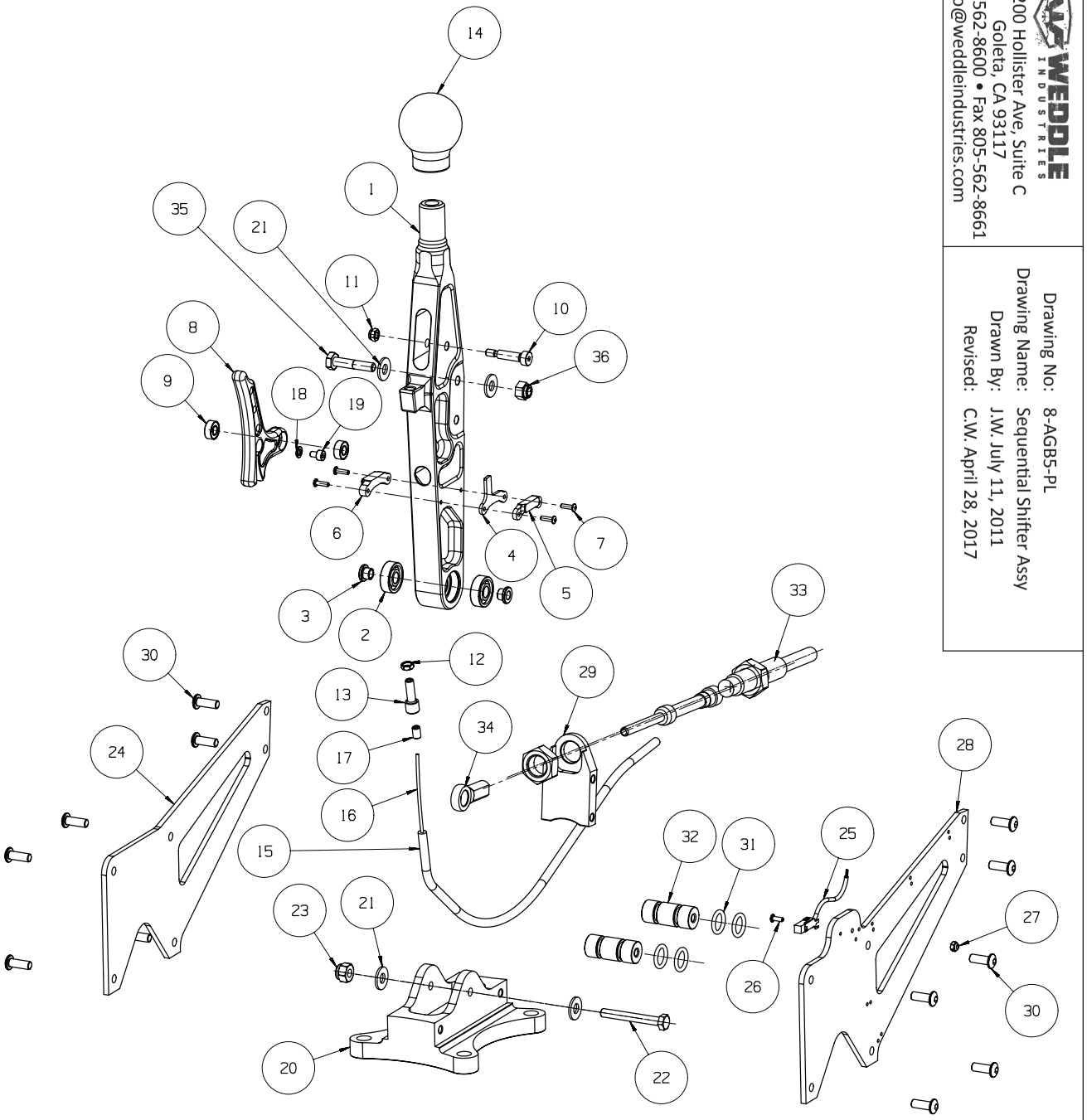


FIGURE 2: POSITION, FUNCTION, AND COLOR OF WIRES IN FEMALE DEUTSCH CONNECTOR.

PIN	FUNCTION	WIRE COLOR
1	GROUND	BLUE
2	+12V	BROWN
3	OUTPUT	BLACK

8-AGB5 SEQUENTIAL SHIFTER ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	AS1S.22021	Gearshift Lever	1
2	AS1S.03781	Ball Bearing	2
3	AS1S.03130	Shift Lever Bearing Ferule	2
4	AS1S.03136	Shift Cut Trigger Plate	1
5	AS1S.03329	Left Rubbing Block	1
6	AS1S.03330	Right Rubbing Block	1
7	H-BM3X10BH-S	Button Head Bolt, M3x10	4
8	AS1S.14448	Reverse Lockout Lever	1
9	AS1S.07382	Ball Bearing	2
10	AS1S.05020	M6X20 Shoulder Bolt	1
11	H-NLM5	Nyloc Nut, M5x0.8	1
12	AS1S.07384	Cable Adjuster Locknut	1
13	AS1S.07383	Cable Adjuster	1
14	AGB.00317	Shift Knob	1
15	AS1S.03777	Reverse Lockout Cable Housing	1
16	AS1S.03778	Reverse Lockout Cable	1
17	AS1S.03779	End Cap for Cable Housing	1
18	H-FW4	Flat Washer, 4mm	1
19	H-BM4X6SH	Socket Head Cap Bolt, M4x6	1
20	AS1S.03131	Shifter Base Plate	1
21	H-FW6	6mm Flat Washer	4
22	H-BM6X50H	M6X50 Hex Bolt	1
23	H-NLM6	M6 Self Locking Nut	1
24	AS1S.03133	RH Side Plate	1
25	AS1S.03930	Proximity Sensor	1
26	H-BM3X8BH-S	M3x8 Button Head Screw	1
27	H-NLM3	M3 Nyloc Nut	1
28	AS1S.03966	LH Side Plate	1
29	AS1S.03135	Cable Mount	1
30	H-BM6X16BH-S	M6x16 Button Head Bolt	12
31	AS1S.03785	O-ring	4
32	AS1S.03134	Cross Support	2
33	AS1S.03732.###	Main Shifter Cable	1
34	AS1S.03786	Female Rod End	1
35	H-B14201250H	1/4-20x1.250" Hex Bolt	1
36	H-NL1420	1/4-20 Nyloc Nut	1



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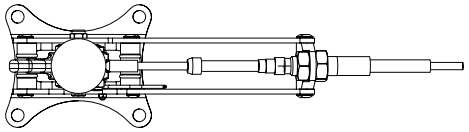
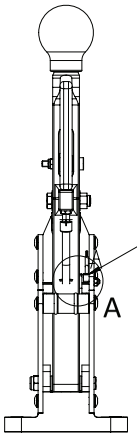
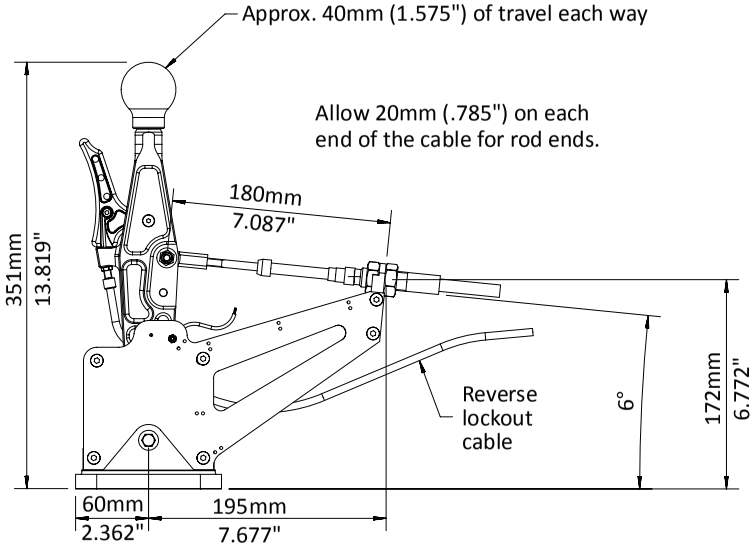
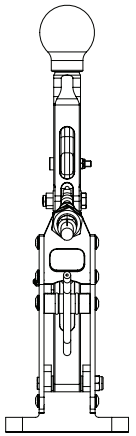
Drawing No: 8-AGB5-PL
Drawing Name: Sequential Shifter Assy
Drawn By: J.W. July 11, 2011
Revised: C.W. April 28, 2017

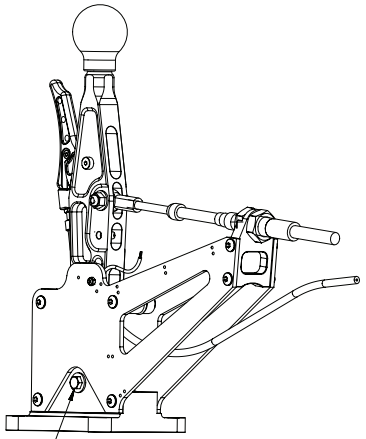
8-AGB5 SEQUENTIAL SHIFTER MOUNTING DIMENSIONS



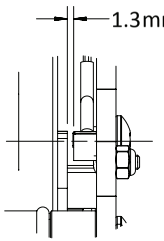




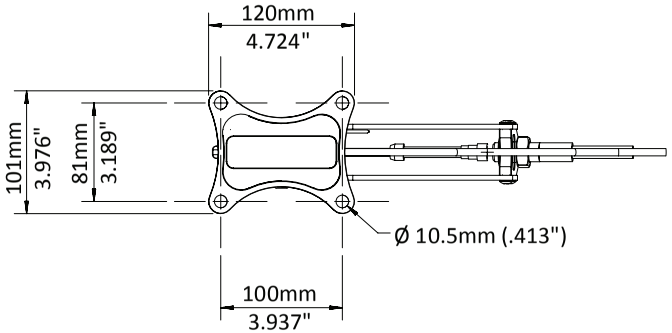




Check gap between proximity sensor and trigger plate. Gap should be 1.3mm (.050").



Detail A



Care should be taken when tightening this bolt to ensure that it is tensioned correctly. Tighten until firm, then back off slightly to remove notchy feel at the stick.

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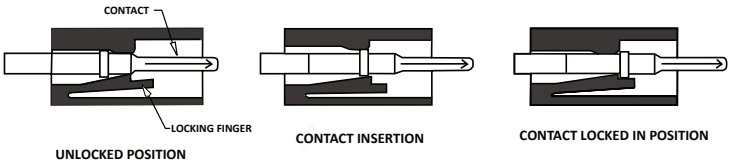
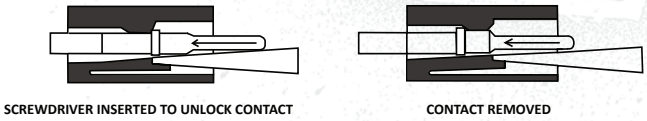
Drawing No:	8-AGB5-DIM
Drawing Name:	Seq Shifter Dimensions
Drawn By:	R.K. June 7, 2006
Revised:	C.W. December 11, 2011

DEUTSCH DTM SERIES CONNECTOR ASSEMBLY

Deutsch Contact Insertion System (DTM Series)

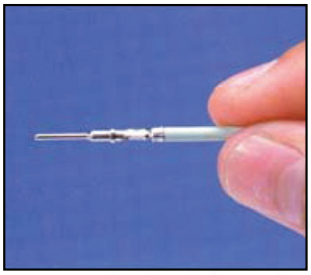


Deutsch Contact Removal Procedure (DTM Series)

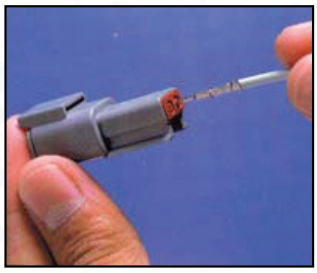


CONTACT INSERTION

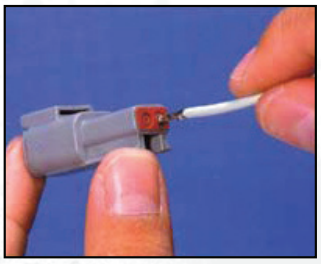
STEP 1: GRASP CRIMPED CONTACT APPROXIMATELY 25MM (1") BEHIND THE CONTACT BARREL.



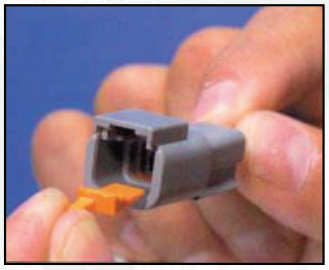
STEP 2: HOLD CONNECTOR WITH REAR GROMMET FACING YOU.



STEP 3: PUSH CONTACT STRAIGHT INTO CONNECTOR GROMMET UNTIL A CLICK IS FELT. A SLIGHT TUG WILL CONFIRM THAT IT IS PROPERLY LOCKED IN.

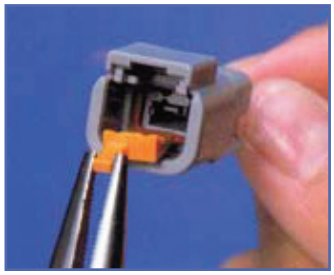


STEP 4: ONCE ALL CONTACTS ARE IN PLACE, INSERT ORANGE WEDGE. RECEPTACLES (SHOWN): THE CONTACTS SHOULD BE SUPPORTED BY HALF-HOLES IN THE WEDGE. PLUGS (NOT SHOWN): THE ENDS OF THE CONTACTS SHOULD ALIGN WITH THE HOLES IN THE WEDGE. IF THE CONTACTS ARE ALIGNED CORRECTLY, THE WEDGE WILL SNAP INTO PLACE WITH GENTLE PRESSURE.

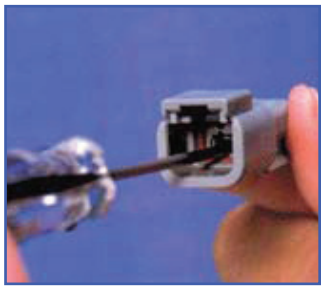


CONTACT REMOVAL

STEP 1: REMOVE ORANGE WEDGE USING NEEDLE NOSE PLIERS TO PULL WEDGE STRAIGHT OUT.



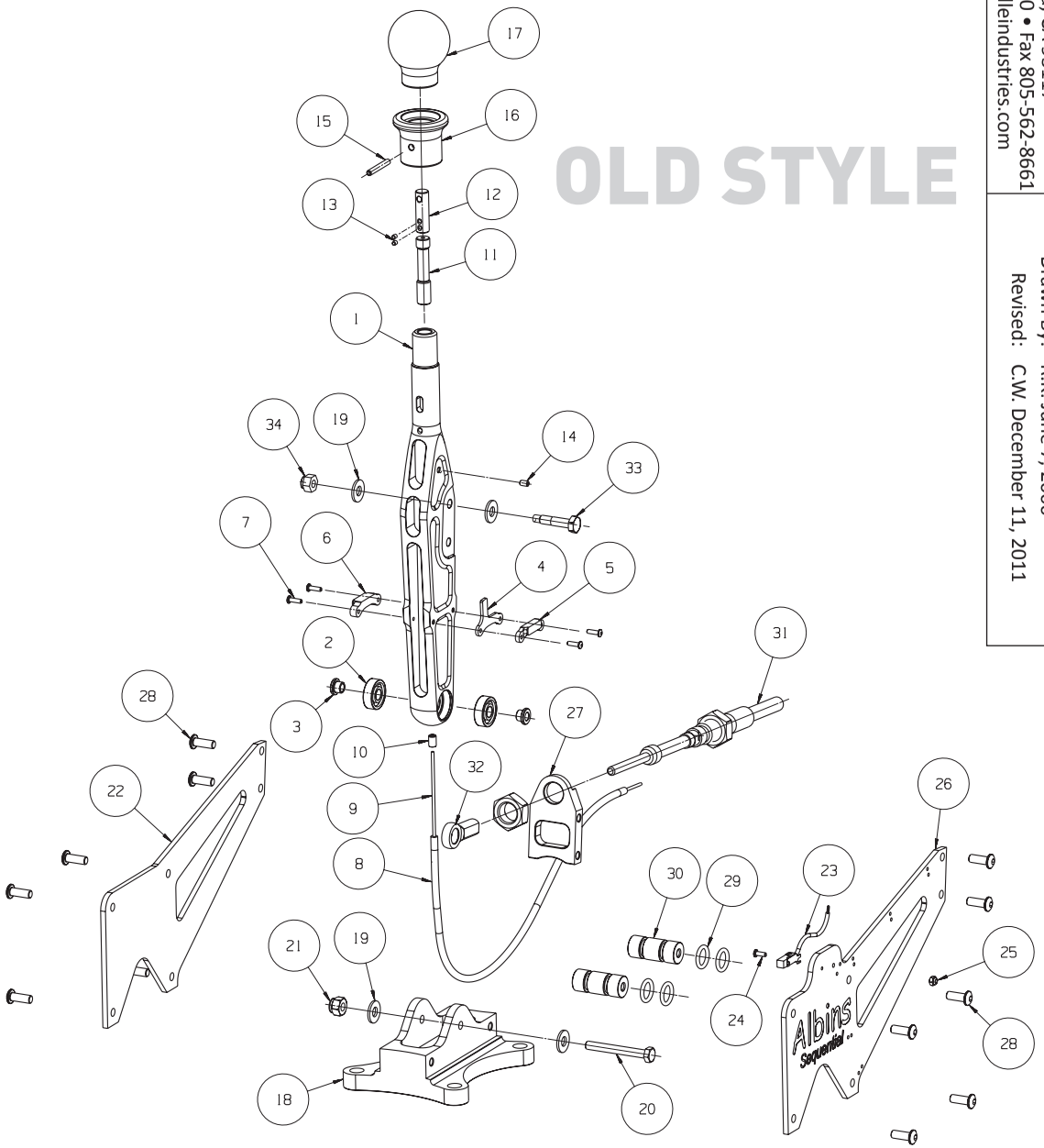
STEP 2: TO REMOVE THE CONTACTS, GENTLY PULL WIRE BACKWARDS, WHILE AT THE SAME TIME RELEASING THE LOCKING FINGER BY MOVING IT AWAY FROM THE CONTACT WITH SCREWDRIVER.



STEP 3: HOLD THE REAR SEAL IN PLACE, AS REMOVING THE CONTACT WILL DISPLACE THE SEAL.

OLD STYLE 8-AGB5 SEQUENTIAL SHIFTER ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	AS1S.03111	Gearshift Lever	1
2	AS1S.03781	Ball Bearing	2
3	AS1S.03130	Shift Lever Bearing Ferule	2
4	AS1S.03136	Shift Cut Trigger Plate	1
5	AS1S.03329	Left Rubbing Block	1
6	AS1S.03330	Right Rubbing Block	1
7	H-BM3X10BH-S	M3x10 Button Head Bolt	4
8	AS1S.03777	Reverse Lockout Cable Housing	1
9	AS1S.03778	Reverse Lockout Cable	1
10	AS1S.03779	End Cap for Cable Housing	1
11	AS1S.03128	Cable Housing Stop	1
12	AS1S.03127	Reverse Lockout Cable Cinch	1
13	AS1S.03780	M3 Grub Screw	2
14	AS1S.03797	Shift Knob	1
15	H-RP4X30	4x30mm Roll Pin	1
16	AGB.00316	Reverse Lockout Release Collar	1
17	AGB.00317	Shift Knob	1
18	AS1S.03131	Shifter Base Plate	1
19	H-FW6	6mm Flat Washer	4
20	H-BM6X50H	M6X50 Hex Bolt	1
21	H-NLM6	M6 Self Locking Nut	1
22	AS1S.03133	RH Side Plate	1
23	AS1S.03930	Proximity Sensor	1
24	H-BM3X8BH-S	M3x8 Button Head Screw	1
25	H-NLM3	M3 Nyloc Nut	1
26	AS1S.03966	LH Side Plate	1
27	AS1S.03135	Cable Mount	1
28	H-BM6X16BH-S	M6x16 Button Head Bolt	12
29	AS1S.03785	O-ring	4
30	AS1S.03134	Cross Support	2
31	AS1S.03732	Main Shifter Cable	1
32	AS1S.03786	Female Rod End	1
33	H-B14201250H	1/4-20x1.250" Hex Bolt	1
34	H-NL1420	1/4-20 Nyloc Nut	1



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Drawing No: 8-AGB5-PL (OLD)
Drawing Name: OLD STYLE Seq Shifter Assy
Drawn By: R.K. June 7, 2006
Revised: C.W. December 11, 2011