

INSTALLING AN INTEGRATED MAGNETIC SWITCH (IMS) (RELAY) ON 28MT, 29MT, 37MT, 38MT, 39MT, 41MT & 42MT HEAVY DUTY STARTING MOTORS

WARNING!!! ALWAYS USE PROPER EYE PROTECTION WHEN PERFORMING ANY MECHANICAL REPAIRS TO A VEHICLE – INCLUDING, BUT NOT LIMITED TO, ANY INSTALLATION AND OR REPAIRS TO THE DELCO REMY STARTING MOTORS. FAILURE TO USE PROPER EYE PROTECTION CAN LEAD TO SERIOUS AND PERMANENT EYE DAMAGE.

Only perform the mechanical functions that you are properly qualified to perform. A professional installation specialist should handle mechanical repairs that are beyond your technical capabilities.

DANGER!!! ALWAYS DISCONNECT BATTERY GROUND BEFORE REMOVING OR REPLACING CABLES AT THE STARTER. FAILURE TO DISCONNECT THE BATTERY GROUND CABLE CAN LEAD TO SERIOUS INJURY.

NOTICE! FOLLOW ENGINE AND/OR VEHICLE MANUFACTURER'S INSTRUCTIONS CAREFULLY WHEN REMOVING AND INSTALLING THE STARTERS (**Removing the starter is not necessary on all applications**).

INTEGRATED MAGNETIC SWITCH (IMS) (RELAY) INSTALLATION PROCEDURES

NOTICE: See illustrations [PAGE 2] for the various mountings and electrical connections for visual assistance to install this Integrated Magnetic Switch (IMS). **Tighten all fasteners according to the torque table.**

- ♦ Disconnect the negative (-) cable at the battery before working on the starter.
- ♦ Identify and tag all leads when removing the old IMS and Starter, if necessary. Save the starter fasteners for reuse.
- ♦ Reattach the leads as they were removed from the old unit. The following is a listing of the various leads and connections that may be on this new IMS:

Solenoid Switch Lead [1] - Attach this lead (small ring terminal) to solenoid switch (+) terminal.

Solenoid Battery Lead [2] - Attach this Lead (large ring terminal) to the solenoid battery (+) terminal. **NOTICE!** This ring terminal should be the last one (closest to nut) assembled on the battery terminal.

Solenoid Ground Lead [3] - Attach this small lead (normally located on the bottom side of the switch, as mounted, to either the solenoid ground terminal [3], starter ground terminal [4] or the IMS mounting screw [6].

- ♦ Install starter per manufacturer's instructions and tighten solenoid and IMS fasteners according to the torque table.
- IMS Switch Terminal [5]** - Attach lead from the Start Switch. If it has a separately mounted Magnetic Switch in the circuit, connect lead that was previously connected to the Solenoid Switch Terminal to this terminal.

Reference Switch Terminal - Attach IMS Switch and Start Switch Leads to the Special Solenoid "S" Terminal.

ADDING THIS IMS TO AN EXISTING STARTER APPLICATION

- ♦ Follow above instructions.
- ♦ Attach lead from the separately mounted Magnetic Switch (Relay), which was attached to the Solenoid Switch Terminal, to the IMS Switch (+) Terminal [5].

NOTE: The separately mounted magnetic switch (relay) will remain in the circuit and continue to function normally.

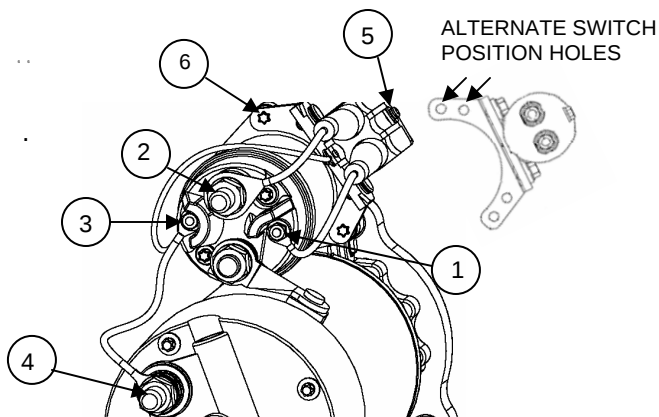
MOUNTING OR RELOCATING AN IMS (RELAY) ON A STARTER (See Illustrations)

- ♦ Loosen the fasteners that attach the IMS leads to the solenoid.
- ♦ Remove the two IMS mounting screws to relocate the switch, if necessary.
- ♦ Move IMS to a different set of mounting holes, if starter has multiple mounting holes, to reposition.
- ♦ Reposition IMS by using a different set of solenoid mounting screws and/or set of bracket holes.
- ♦ Reinstall the mounting screws and tighten all fasteners according to the torque table.

TORQUE TABLE

Starter	1	Solenoid Switch (+)	2	Solenoid Battery (+)	3	Solenoid Ground (-)	4	Starter Ground (-)	5	IMS Switch (+)	6	Mounting IMS Bolts
12 Volt 37MT, 41MT, 42MT		1.8-3.4 Nm (16-30 lb in)		27-34 Nm (20-25 lb ft)		1.7-3.4 Nm (16-30 lb in)		27-34 Nm (20-25 lb ft)		1.1-2.4 Nm (10-21 lb in)		14.1-21.5 Nm (125-190 lb in)
24 Volt 37MT, 41MT, 42MT		1.8-3.4 Nm (16-30 lb in)		20-27 Nm (15-20 lb ft)		1.7-3.4 Nm (16-30 lb in)		20-27 Nm (15-20 lb ft)		1.1-2.4 Nm (10-21 lb in)		14.1-21.5 Nm (125-190 lb in)
38MT, 39MT		2.0-2.25 Nm (18-20 lb in)		24.5-27.5 Nm (18-20 lb ft)		2.0-2.25 Nm (18-20 lb in)		24.5-27.5 Nm (18-20 lb ft)		1.9-2.4 Nm (17-21 lb in)		5.5-6.5 Nm (49-57 lb in)
29MT		2.0-2.25 Nm (18-20 lb in)		14.7-17.7 Nm (10-13 lb ft)		2.0-2.25 Nm (18-20 lb in)		14.7-17.7 Nm (10-13 lb ft)		3.1-5.1 Nm (27-45 lb in)		5.5-6.5 Nm (49-57 lb in)
28MT		2.5-3.1 Nm (22-27 lb in)		15.7-19.6 Nm (12-14 lb ft)		1.6-2.1 Nm (14-19 lb in)		NA		See Illustration [SST] Page 2		5.5-6.5 Nm (49-57 lb in)

WARNING - Be aware that only licensed Delco Remy product and component parts should be used and the use of other parts or modifications not approved by Delco Remy will void any warranty concerning, but not limited to, product performance or reliability. The failure to carefully follow Installation Package guidelines set forth above will likewise void any and all warranty, **including the implied warranties of merchantability and fitness for a particular purpose.**



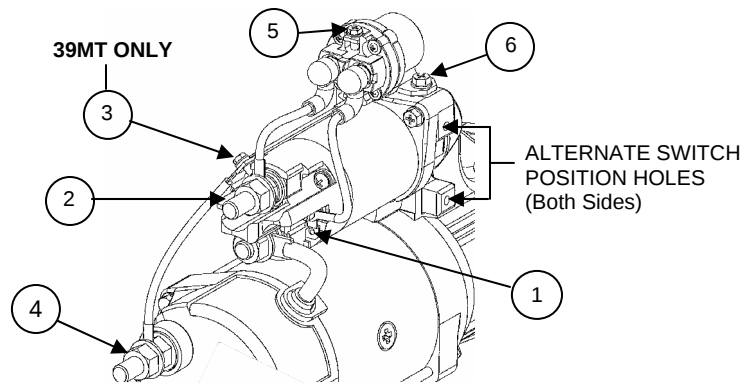
37MT, 41MT or 42MT STARTER

TERMINAL LEGEND

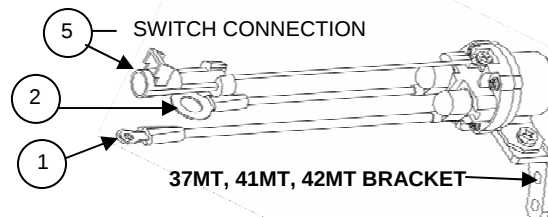
1. Solenoid Switch (+)
2. Solenoid Battery (+)
3. Solenoid Ground (-)
4. Starter Ground (-)
5. IMS Switch (+)

Attach lead that was removed from Solenoid Switch Terminal. It will be the lead from the separately mounted Magnetic Switch (Relay) or Vehicle Start Switch.

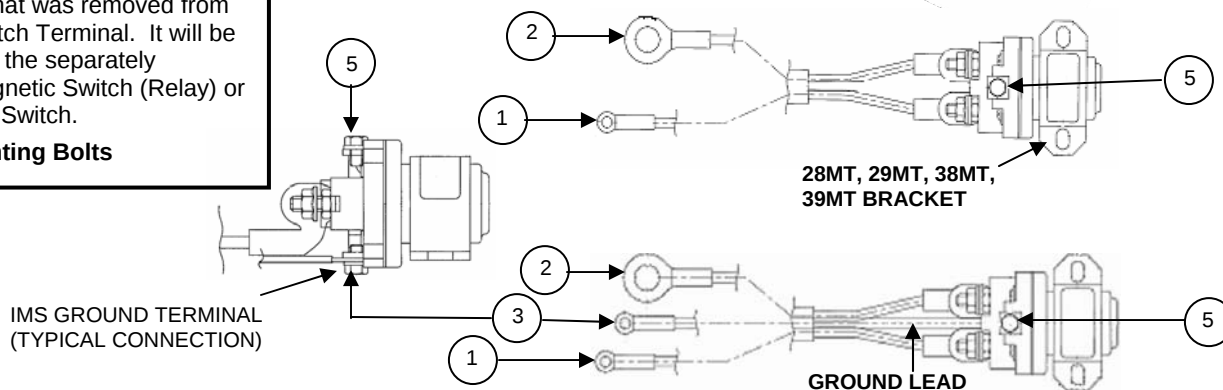
6. IMS Mounting Bolts



38MT or 39MT STARTER



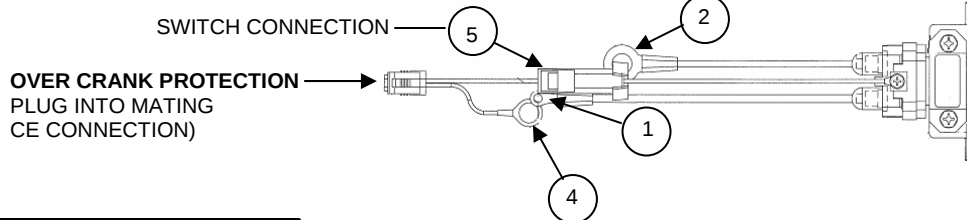
37MT, 41MT, 42MT BRACKET



28MT, 29MT, 38MT, 39MT BRACKET

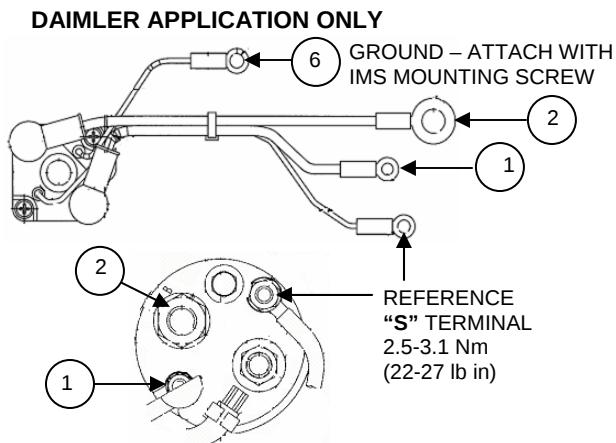
GROUND LEAD

IMS GROUND TERMINAL
(TYPICAL CONNECTION)



OVER CRANK PROTECTION
PLUG INTO MATING
CE CONNECTION)

SWITCH CONNECTION

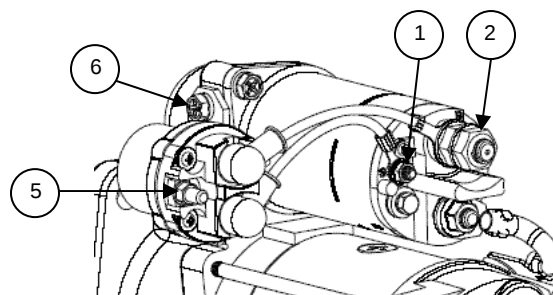


DAIMLER APPLICATION ONLY

GROUND - ATTACH WITH
IMS MOUNTING SCREW

REFERENCE
"S" TERMINAL
2.5-3.1 Nm
(22-27 lb in)

[SST] 28MT SPECIAL SOLENOID COVER



28MT or 29MT STARTER