

# PREVOST

## Instruction Sheet

## IS-02053D

### REPLACEMENT OF DELCO STARTER WITH MELCO 105P70 STARTER (FIRST INSTALLATION)

REVISION : E

Item 510752 (starter motor) replaced by 510004

#### MATERIAL

Kit #012260 (required for the first installation of the Melco starter) includes the following parts:

Part No.	Description	Qty
510004	Starter motor, w/relay 24V	1
5001098	Washer, flat copper M12	2
500860	Nut M12-1.75	3
500482	Washer, split .875-.518X.125	3
502561	Nut M5-0.8	1
500470	Washer, split .334-.200X.047	1
560407	Magnetic Relay 24 volts	1
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#### PROCEDURE

##### WARNING

Park vehicle safely, apply parking brake, stop engine and set battery master switch(es) to the OFF position prior to working on the vehicle.

##### CAUTION

Do not engage starter for more than 15 seconds at a time. If engine does not start within 15 seconds, release ignition key and let starter cool for one minute before attempting to restart.

**⚠ CAUTION ⚠**

**Prior to the installation of the Mitsubishi starter, the Flywheel Ring Gear must be examined for excess wear or damage. Service Bulletin A1-M1N-1729EN included at the end of this instruction sheet shows acceptable levels of wear, and illustrates the proper measuring procedure. Maximum wear is 0.5mm. Ring Gears with more than 0.5mm of wear or damage must be replaced before installing the new starter to prevent engagement and/or disengagement problems. Failure to do so will render the Warranty null and void.**

### STARTER INSTALLATION

1. Locate the starter on the R.H. side of the engine. Disconnect the cables (#101, #102 or #102A with 2 Bosch alternators, #86, #86F and ground wire) connected to the starter terminals.
2. Unscrew the 3 fixing bolts securing the starter and dismount the starter. Keep the bolts for later use.
3. Remove the protective cap and cut the plastic molding from cable #101 ring terminal for the reconnection purposes (see figure 1 & 2).
4. Fix the new starter on the engine. Tighten the bolts to a torque of 138-154 lbf-ft (187-209 Nm).
5. Reconnect the cables to the starter as per figure 3. Use the fasteners shown on the figure and tighten to the specified torques.
6. In order to prevent the copper connections from corroding, apply Rubber Guard protector (Prevost P/N 684013) or any another appropriate electrical terminal protector.

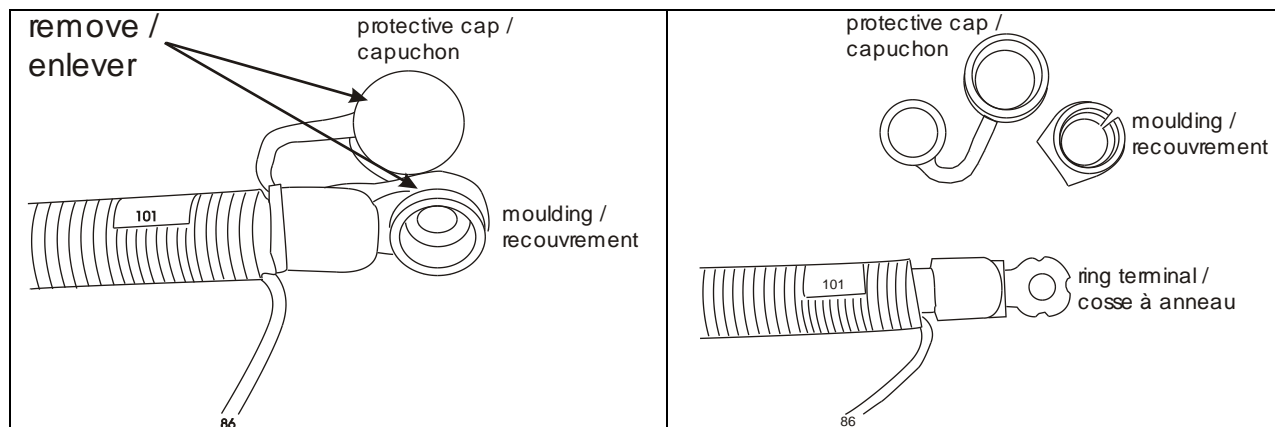


FIGURE 1: CABLE #101 BEFORE MODIFICATION

FIGURE 2: CABLE #101 AFTER MODIFICATION

### R4 RELAY REPLACEMENT

**Note:** Relay R4 on vehicle has to be changed when replacing Delco starter with Melco starter.

1. Locate existing R4 relay on your vehicle.
  - o H3 Coach & VIP: Main power compartment.
  - o XLII Coach: Main power compartment.
  - o MTH XLII 40 & MTH XLII 45: Rear junction box inside engine compartment.

**Note:** Properly identify the wires before disconnecting them from the relay, mark which terminal they are connected to. They have to be reconnected to the corresponding terminals on the new relay.

2. Disconnect the wires from the relay. Remove the diode. Note the current flow (see the coloured edge). The diode has to be reinstalled in the same manner.

3. Fix the new relay on the wall.
4. Reconnect the wires to the relay.

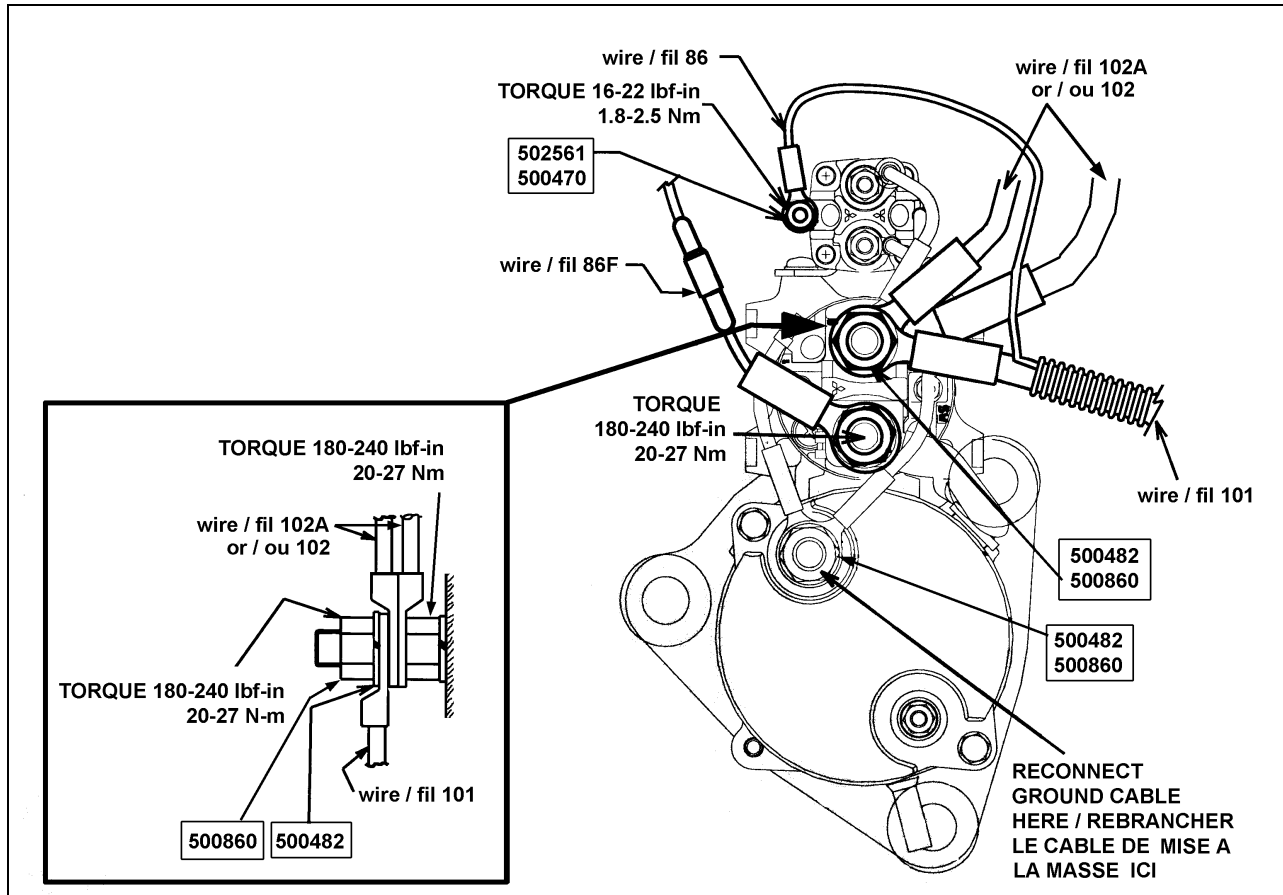


FIGURE 3: VIEW OF CONNECTIONS, FASTENERS & SPECIFIED TORQUES

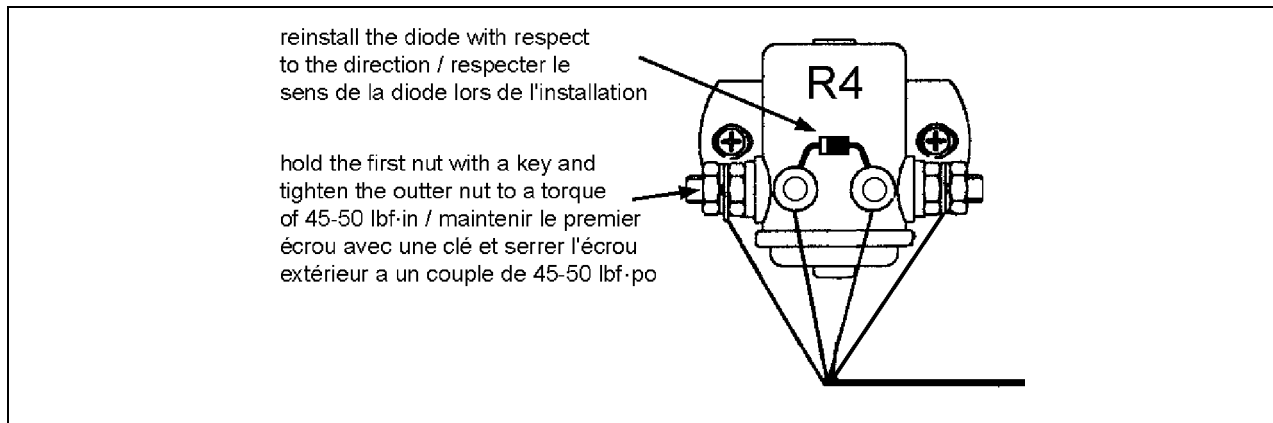


FIGURE 4: RELAY TYPICAL CONNECTIONS

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## Service Bulletin A1-M1N-1729EN - Flywheel Ring Gear Wear / Damage

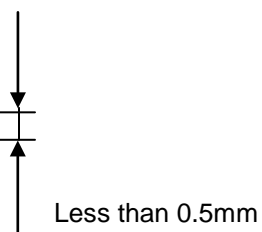
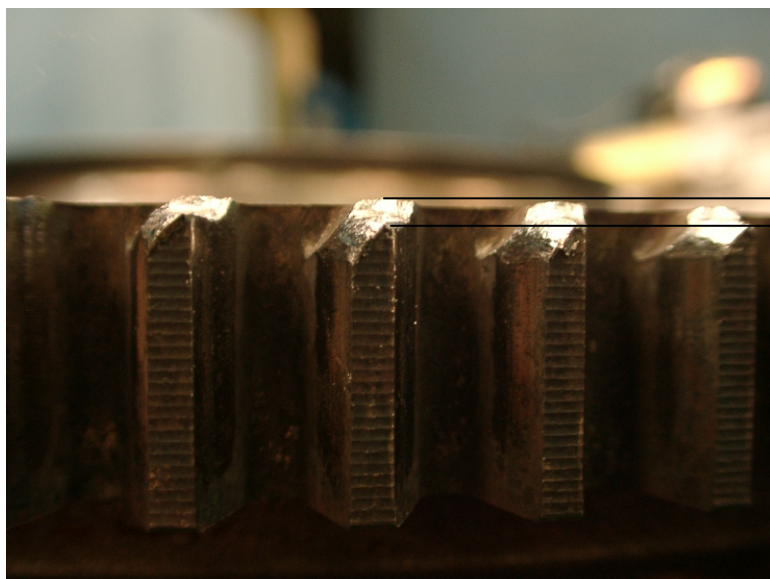
(Sample of Maximum Ring Gear Wear /Damage)



Please refer to the above photos and please replace the ring gear which has similar level of damage as these. See the next page for the method to measure the depth of the damage.

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(Depth of wear / damage on ring gear)



(Measurement method)



Dimension between the mounting surface and the end surface of ring gear



Dimension between the mounting surface and the damage depth portion of ring gear