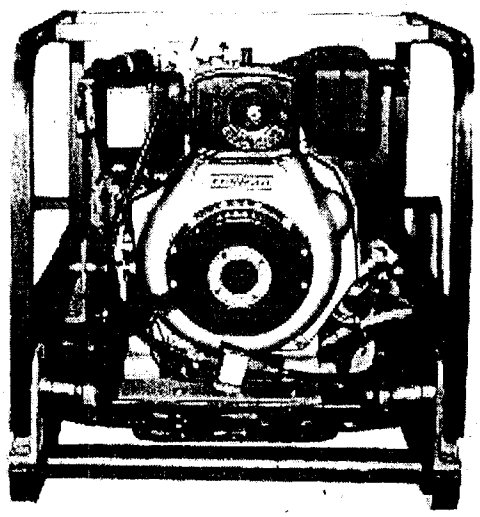
TECHNICAL MANUAL
SUPPLEMENT

REVISION A

OPERATOR'S, UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS FOR GENERATOR SET, DIESEL ENGINE DRIVEN, SKID MOUNTED, TUBULAR FRAME, 3 KW, 3 PHASE, 60 HZ/400 HZ, 120/208 AND 120/240 VOLTS AC, MODELS MEP-016D AND MEP-021D

DOD Model	Hertz	AC	National Stock Number
MEP-016D	60	120/208	6115-01-449-2108
MEP-021D	400	120/240	6115-01-449-1597



This publication supplements TM 5-6115-271-14 (Army), TO 35C2-3-386-1 (Air Force), TM 0596A-14 (Marine Corps), and NAVFAC P-8-613-14 (Navy).

Headquarters, Department of the Army, Washington, D.C.

PURPOSE AND SCOPE

This supplement provides an interface between the technical manual for the gasoline engine and the operator's manual for the Yanmar diesel engine. This supplement contains information you will need to operate, maintain, and troubleshoot the modified 3-kilowatt (kW) generator set under usual conditions.

IMPACT

This change will affect information in the repair parts and special tools list (RPSTL) and in technical manuals (Maintenance Allocation Chart and Troop Installed or Additional Authorized Items List). The manuals will need to reflect multiple configurations, which are necessary because only 2,000 out of 40,000 generator sets are being modified from gasoline to diesel engines. These multiple configurations will impact the Unit and Direct Support levels of maintenance.

GENERAL

This supplement has a maintenance instructions section and two appendixes, as follows:

- Maintenance Instructions
  a. Generator Set Disassembly After Modification (Using Diesel Engine) (p. 3)
  b. Generator Set Assembly After Modification (Using Diesel Engine) (p. 15)
  c. Voltage Regulator Replacement (p. 27)
  d. Generator Set Function Check (p. 28)
     Test Data Sheet (p. 29)
- Appendix A. Modification Kit Parts List (p. A-1)
- Appendix B. Cross-Reference Index (p. B-1)

MAINTENANCE INSTRUCTIONS

a. Generator Set Disassembly After Modification (Using Diesel Engine)

WARNING

- **Make sure generator is not running and circuit breaker is off. Failure to follow this warning may cause a spark to ignite, resulting in serious injury or death to personnel or damage to equipment.**

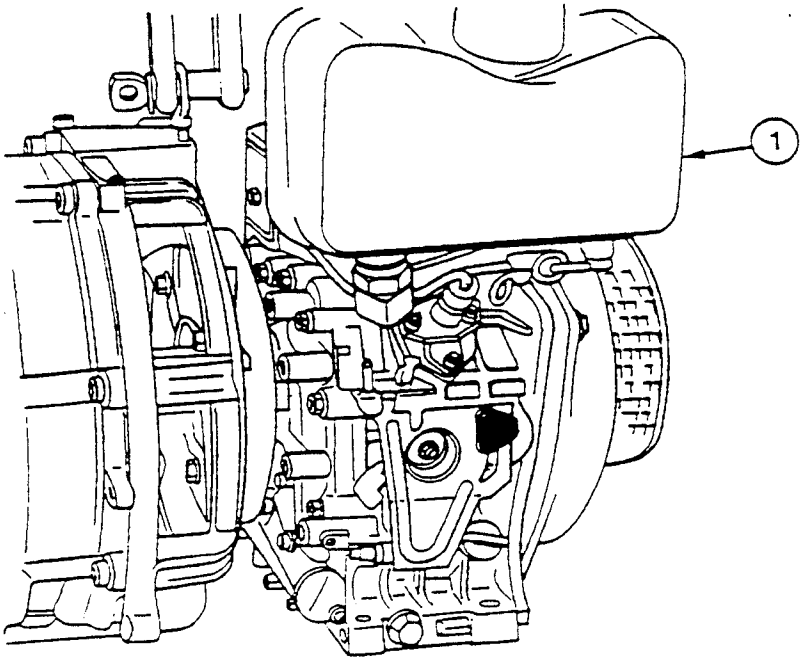
- **Make sure frame and generator are grounded to an approved (earth) ground, and it must be safe to proceed. Failure to follow this warning may cause a spark to ignite, resulting in serious injury or death to personnel or damage to equipment.**

- **Make sure upper fuel tank, lower fuel tank, and engine reservoir are free of all liquid. Failure to follow this warning may cause a hazardous fuel spill, resulting in serious injury or death to personnel or damage to equipment.**

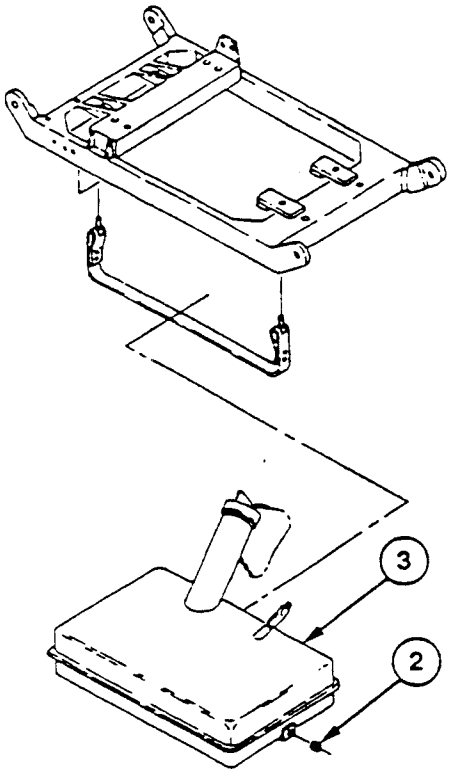
NOTE

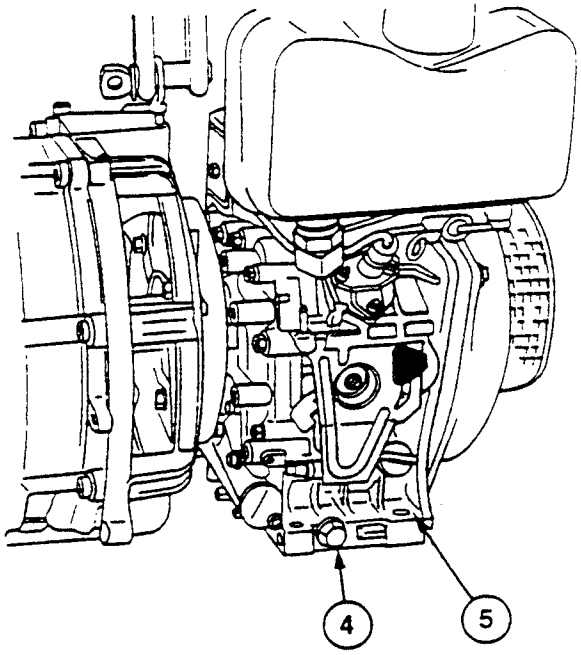
Drain contaminated fuel into a fuel container approved by the Occupational Safety and Health Administration (OSHA).

1. Drain diesel fuel from upper fuel tank (1).



2. Remove tank drain plug (2) on lower fuel tank (3) and drain diesel fuel. Replace drain plug and tighten.



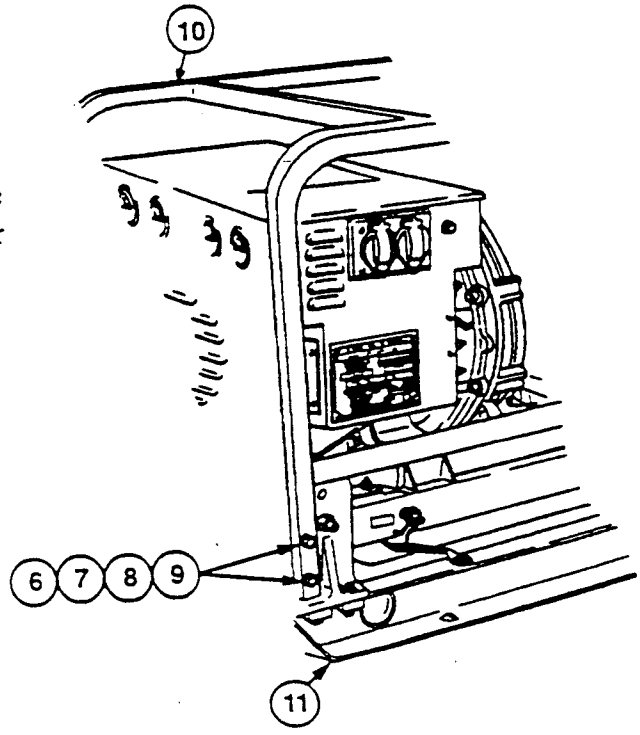


NOTE

Drain contaminated oil into an oil container approved by OSHA.

3. Remove engine drain plug (4) on oil pan (5) and drain oil. Replace drain plug and tighten.

4. Remove eight screws (6), eight lockwashers (7), eight washers (8), four nuts (9), and top frame (10), from outer frame (11). (The four upper screws do not require nuts).



5. Remove four nuts (12), lockwashers (13), and washers (14) attaching two tank straps (15) to inner frame (16). Discard lockwashers.

NOTE

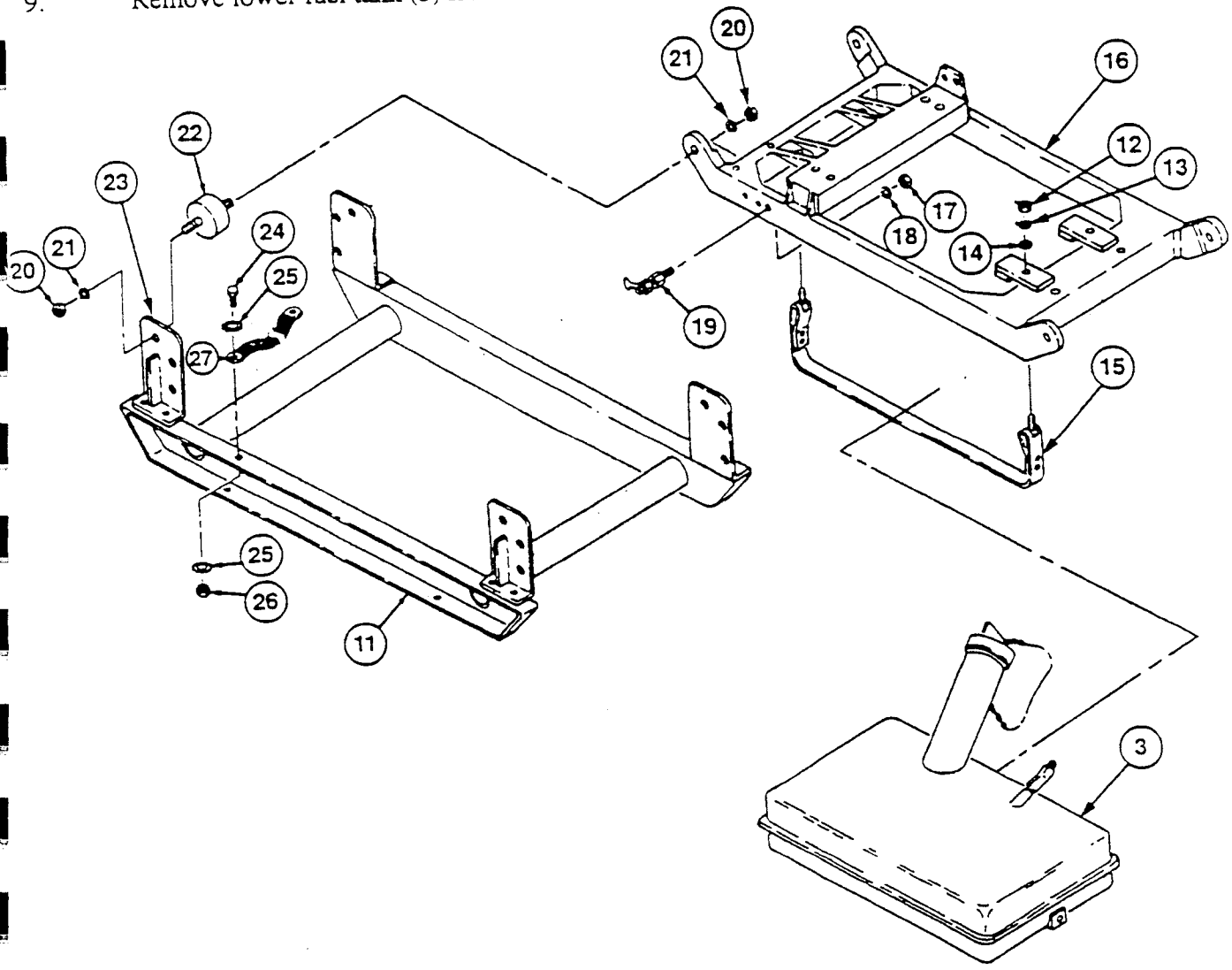
Disregard step 6 if plastic fuel tank is utilized.

6. Remove nut (17) and lockwasher (18) attaching load ground terminal (19) to inner frame (16). Discard lockwasher.

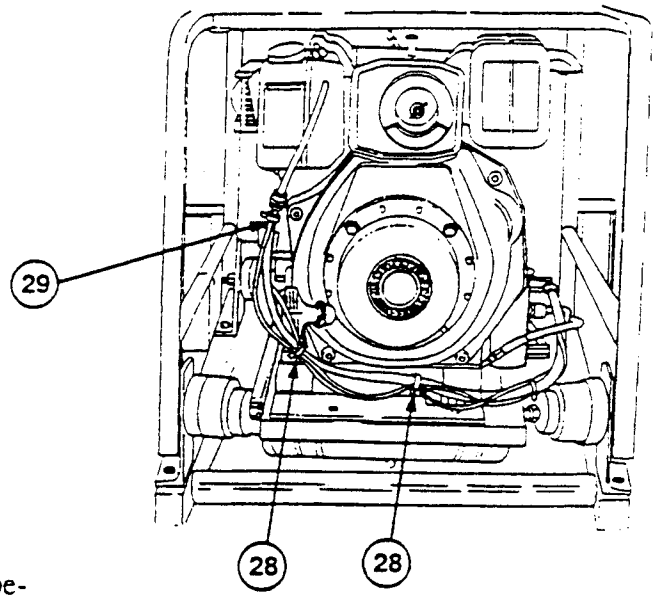
7. Remove eight nuts (20) and lockwashers (21) attaching four inner frame vibration pads (22) to inner frame (16) and modified corner support bracket (23). Discard lockwashers.

8. Remove two screws (24), four lockwashers (25), and two nuts (26) attaching ground lead (27) to outer frame (7) and fuel tank (3). Discard lockwashers.

9. Remove lower fuel tank (3) from outer frame (11).



10. Remove tiedown straps (28) and clamp (29) from electrical wires.



NOTE

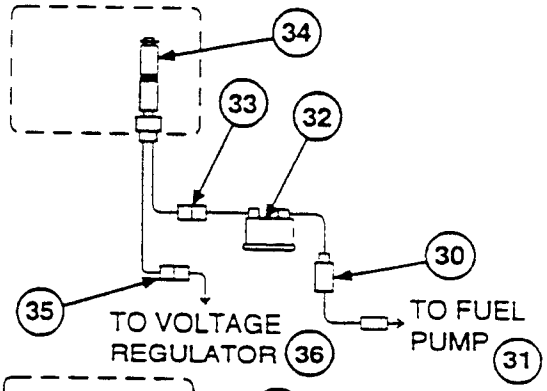
If float switch has two wires, do steps 11 and 12. If float switch has three wires, do steps 13 and 14.

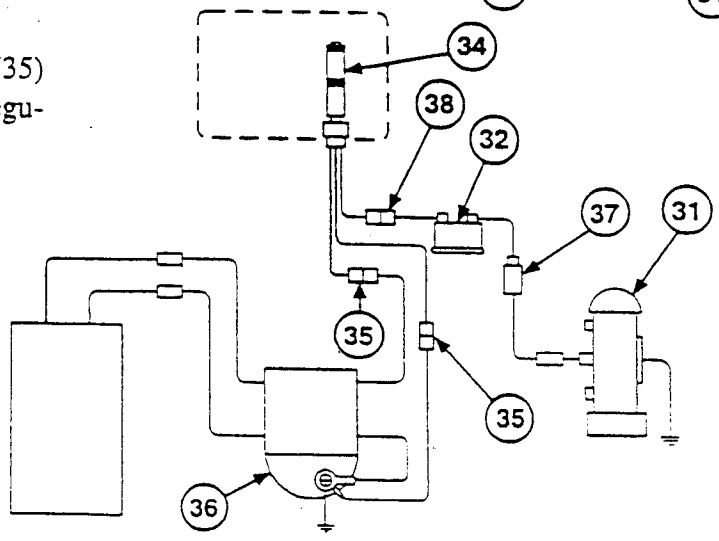
11. Disconnect electrical connector (30) between electrical fuel pump (31) and circuit breaker (32). Disconnect electrical connector (33) between circuit breaker (32) and float switch (34).

12. Disconnect electrical connector (35) between float switch (34) and voltage regulator (36). Go to step 15.

13. Disconnect electrical connector (37) between electrical fuel pump (31) and circuit breaker (32). Disconnect electrical connector (38) between circuit breaker (32) and float switch (34).

14. Disconnect two electrical connectors (35) between float switch (34) and voltage regulator (36).

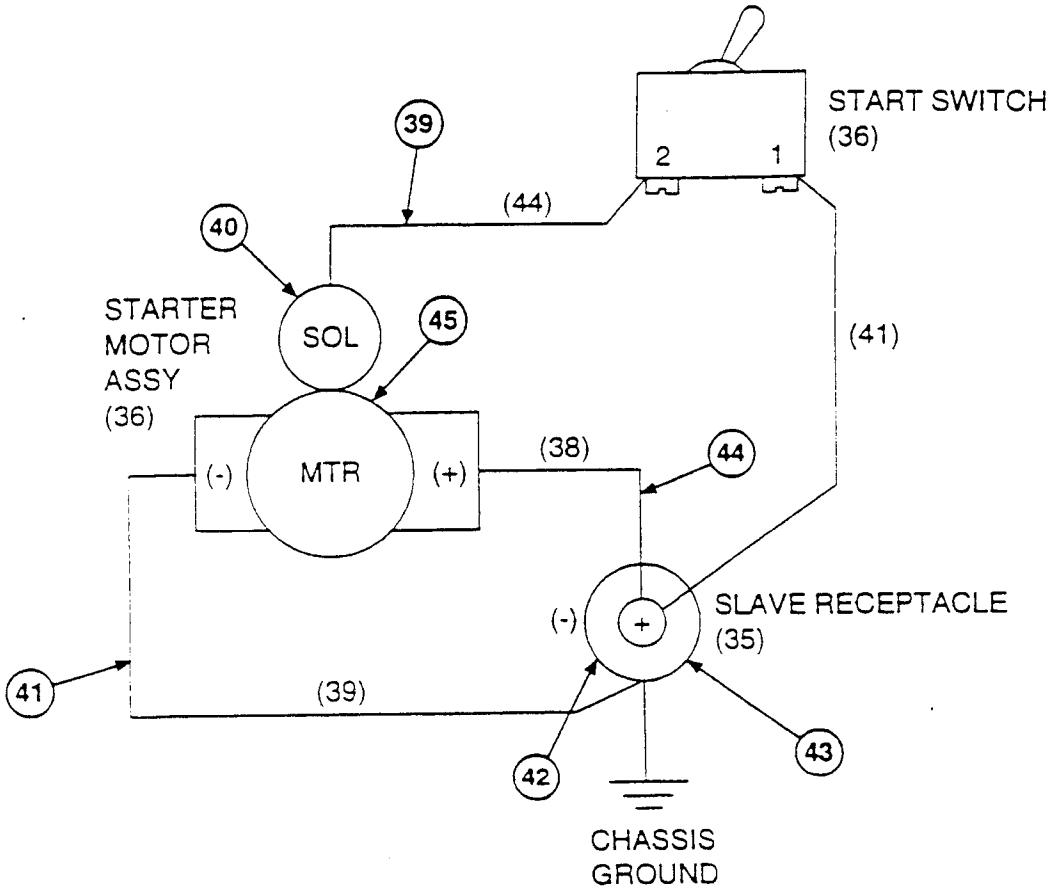




15. Remove wire (39) from solenoid (40).

16. Remove wire (41) from negative terminal (42) on connector assembly (43).

17. Remove wire (44) from positive terminal on starter (45).



18. Remove hose clamp (46) attaching fuel line (47) to upper fuel tank (1). Discard hose clamp.

NOTE

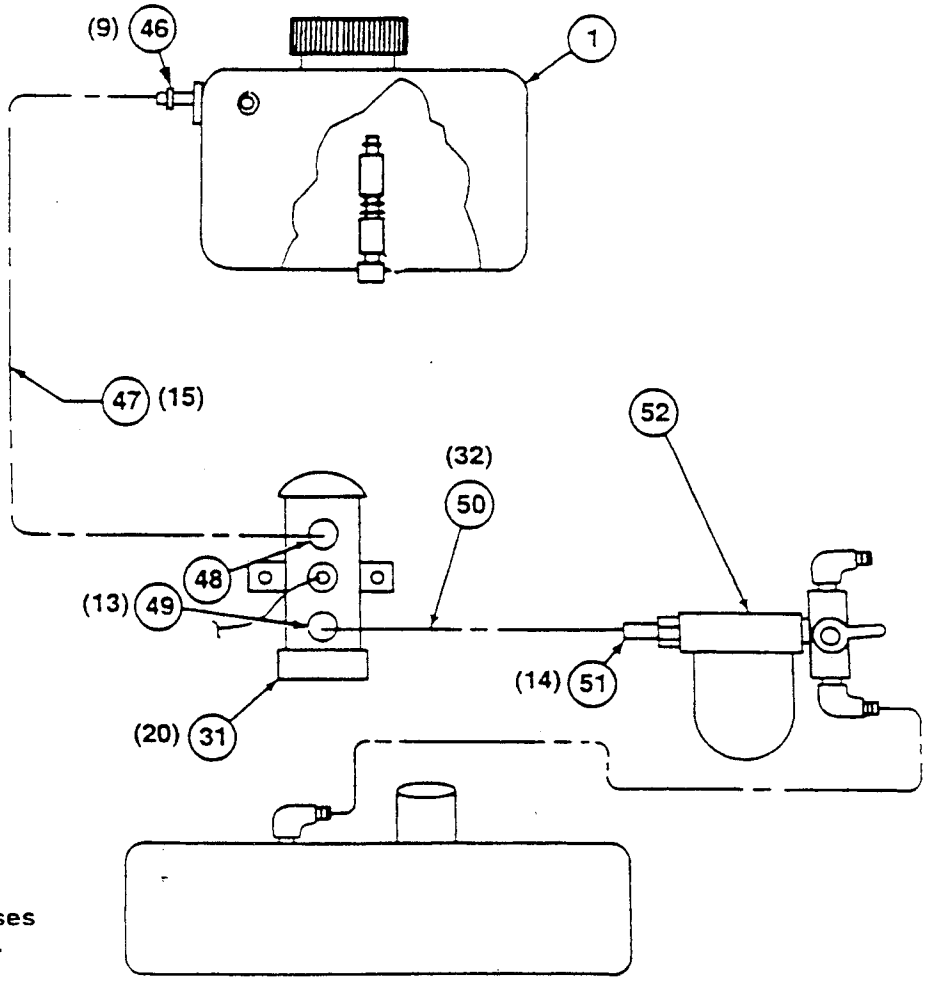
After disassembly, remove and discard Teflon tape from fittings.

19. Remove hose fitting (48) and fuel line (47) from electrical fuel pump (31).

20. Disconnect fuel line (47) from upper fuel tank (1). Drain fuel from fuel line.

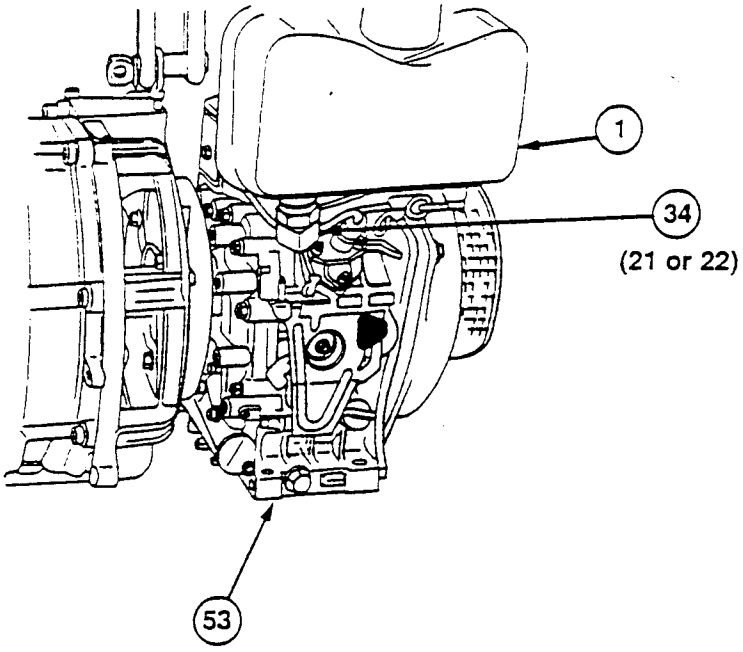
21. Remove hose fitting (49) and fuel tank fuel line (50) from electrical fuel pump (31).

22. Remove hose fitting (51) and fuel tank fuel line (50) from fuel strainer (52). Drain fuel line.



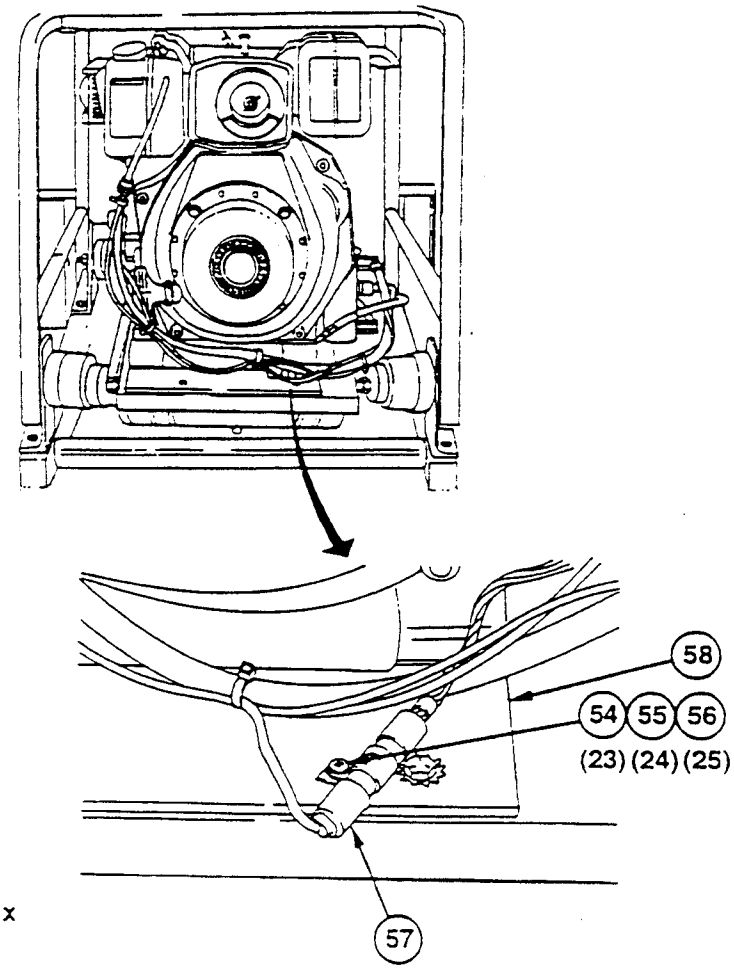
NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

23. Remove upper fuel tank (1) from engine (53).



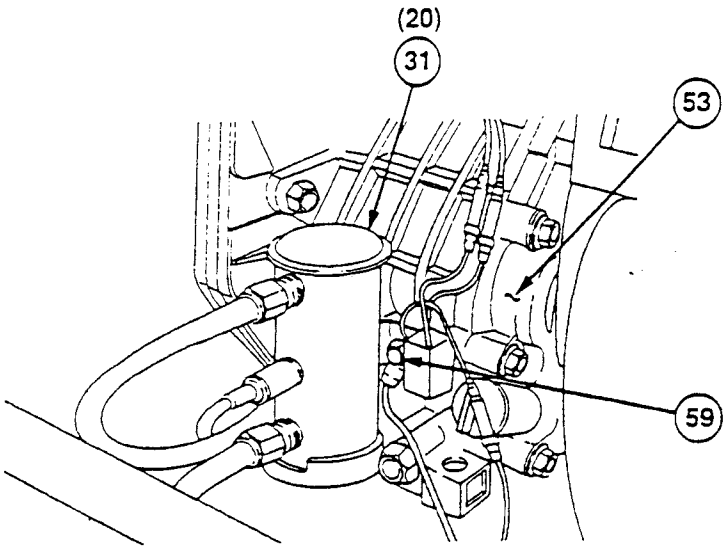
24. Remove float switch (34) from upper fuel tank (1).

25. Remove screw (54), washer (55), and lockwasher (56) attaching fuel pump ground lead (57) to front engine mounting bracket (58). Discard lockwasher.

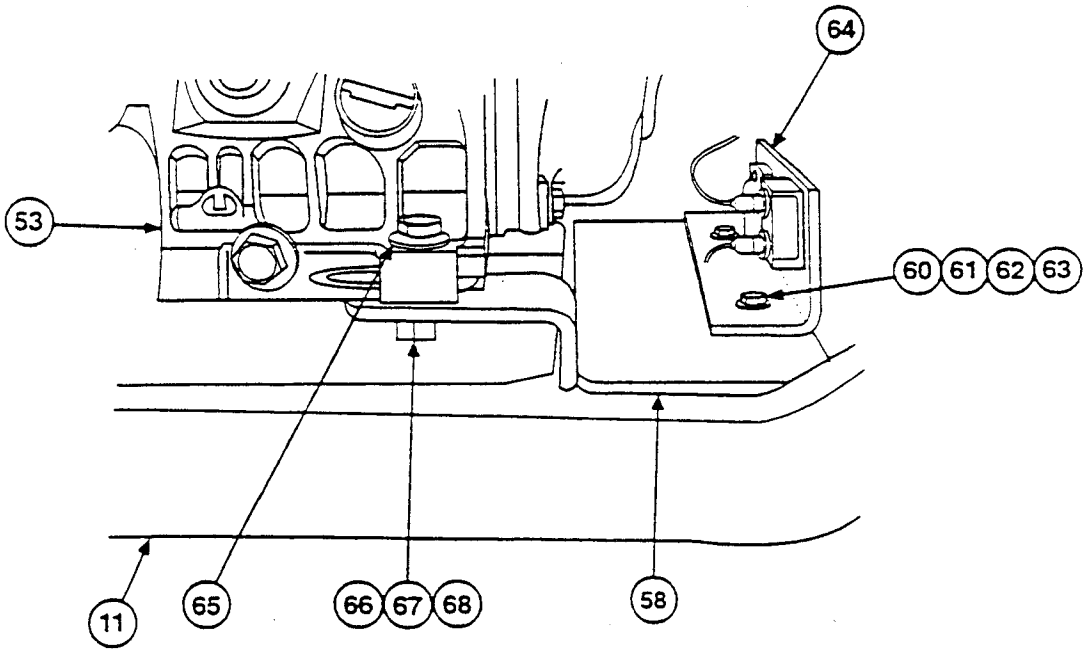


NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

26. Remove two screws (59) attaching electrical fuel pump (31) to side of engine (53).



27. Remove two screws (60), washers (61), lockwashers (62), nuts (63), and bracket (64) from engine mounting bracket (58) and inner frame (11). Remove two screws (65), washers (68), lockwashers (66), and nuts (67), attaching front engine mounting bracket (58) to engine (53) and outer frame (7). Discard lockwashers.



NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

28. Remove wire assembly (39) from switch connector (69) marked 2.

29. Remove wire assembly (70) and wire assembly (44) from positive terminal (71) on connector assembly (43). Remove other end of wire assembly (70) from switch connector (69) marked 1.

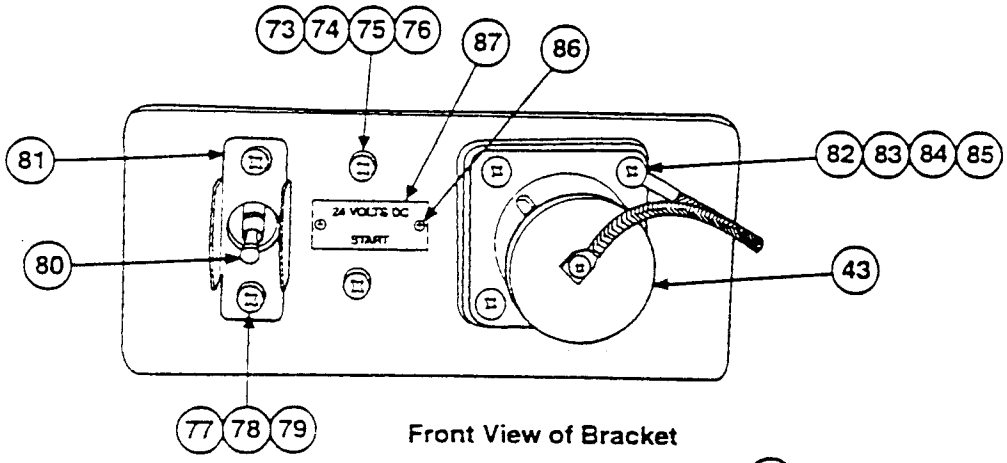
30. Remove two wire assemblies (72) from circuit breaker (32).

31. Remove two nuts (73), washers (74), lockwashers (75), and screws (76) and circuit breaker (32) from bracket (64). Discard lockwashers.

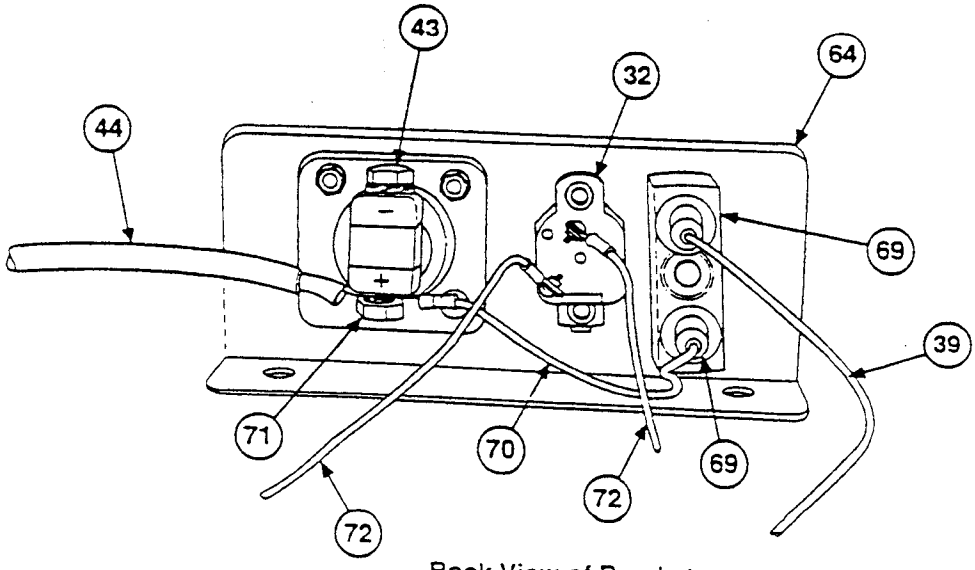
32. Remove two screws (77), lockwashers (78), and washers (79), and switch (80) and switch guard (81) from bracket (64). Discard lockwashers.

33. Remove four nuts (82), lockwashers (83), four washers (84), and four screws (85) and connector assembly (43) from bracket (64). Discard lockwashers.

34. Remove two drive screws (86) and information plate (87) from bracket (64). Discard lockwashers.

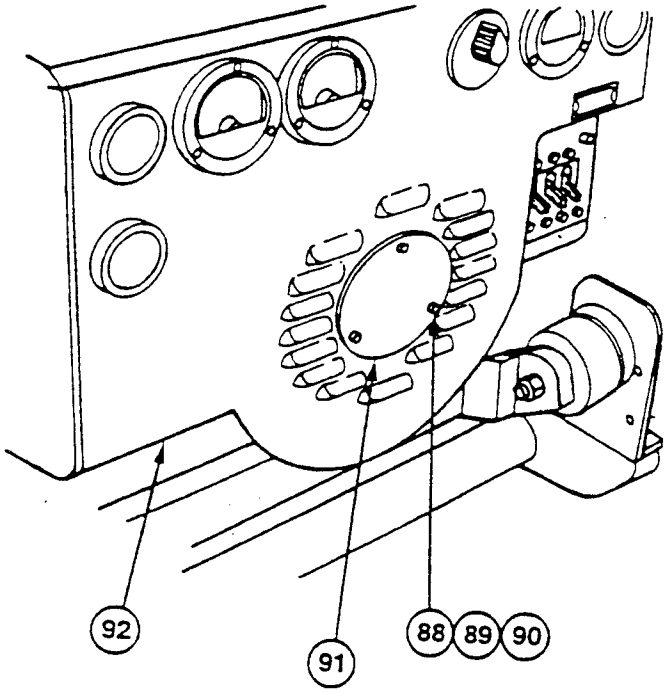


Front View of Bracket

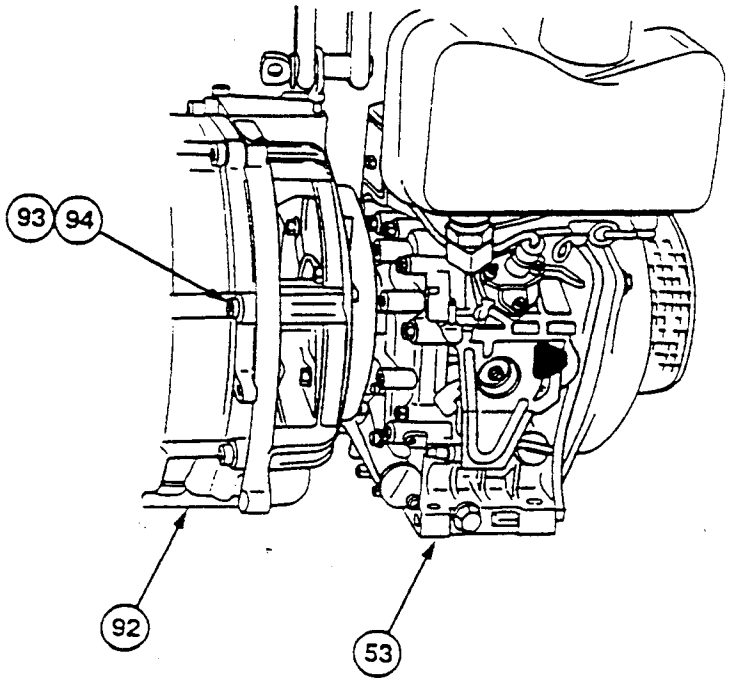


Back View of Bracket

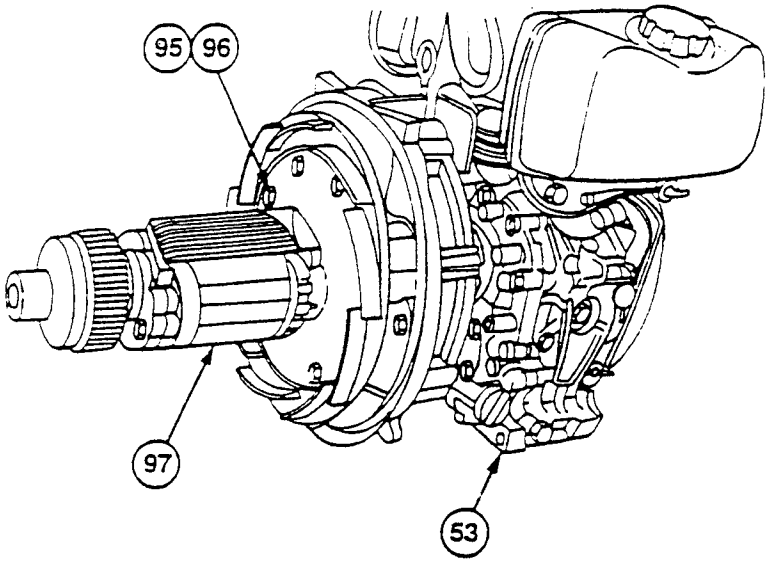
35. Remove three screws (88), lockwashers (89), and washers (90) attaching access cover (91) (if equipped) to generator housing (92). Discard lockwashers.



36. Remove eight socket-head screws (93) and lockwashers (94) attaching engine (53) to generator housing (92). Using suitable lifting device, remove engine. Discard lockwashers.



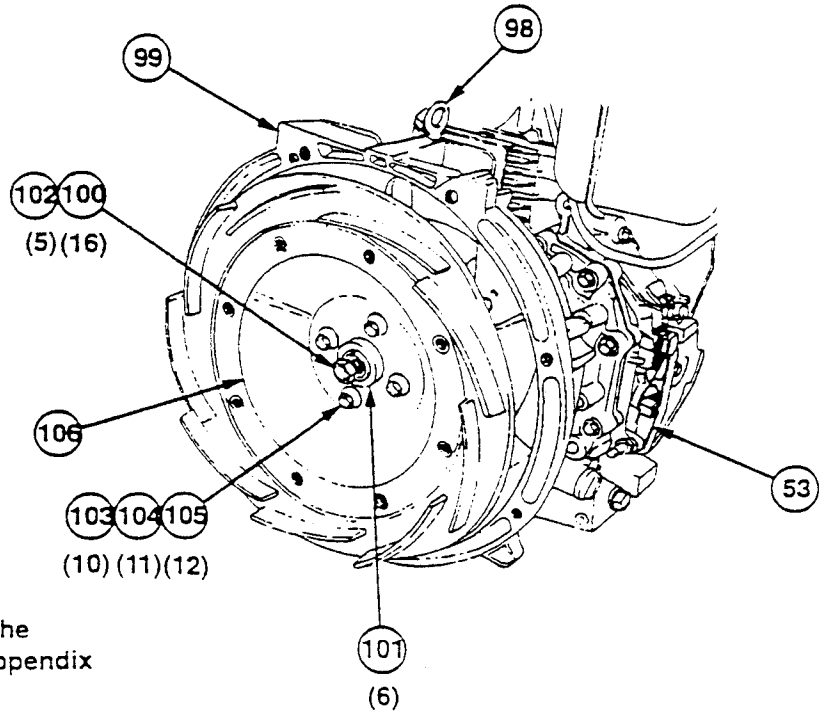
37. Remove eight screws (95) and lockwashers (96) attaching generator (97) to engine (53). Discard lockwashers.



38. Remove eyehook (98) from top of adapter housing (99).

39. Remove screw (100) attaching shaft adapter (101) and retainer (102) to engine (53).

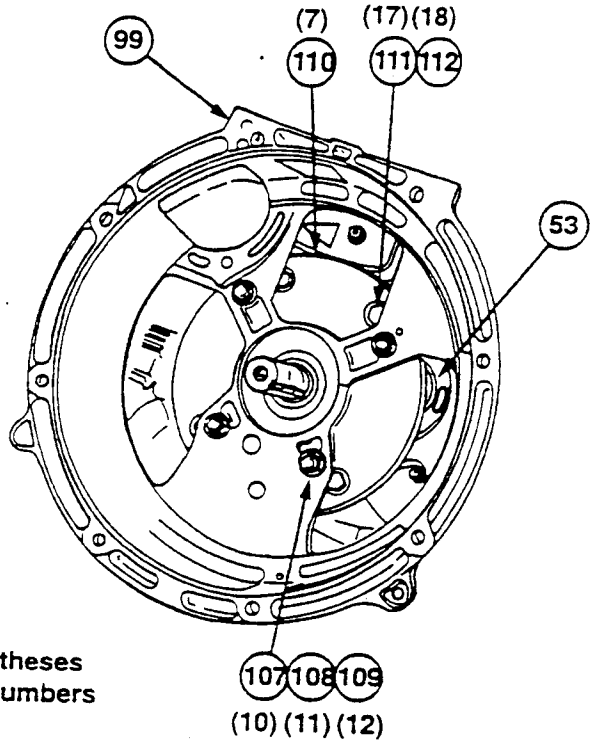
40. Remove four screws (103), washers (104), and lockwashers (105) attaching fan rotor housing (106) to shaft adapter (101). Discard lockwashers.



NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

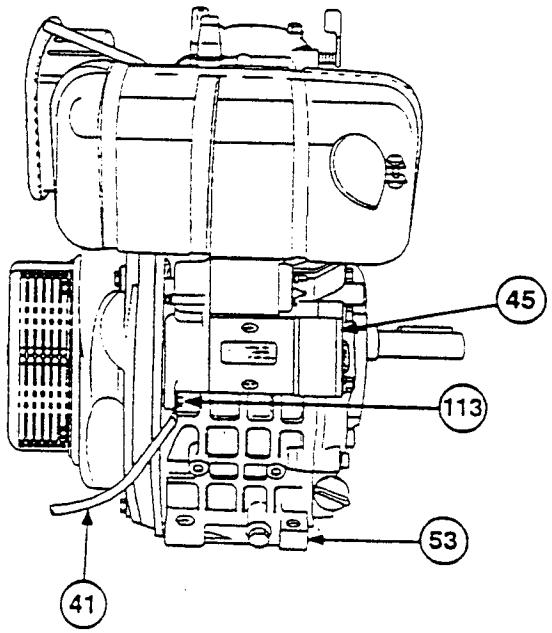
41. Remove four screws (107), washers (108), and lockwashers (109) attaching adapter housing (99) to adapter plate (110). Discard lockwashers.

42. Remove four screws (111) and lockwashers (112) attaching adapter plate (110) to engine (53). Discard lockwashers.



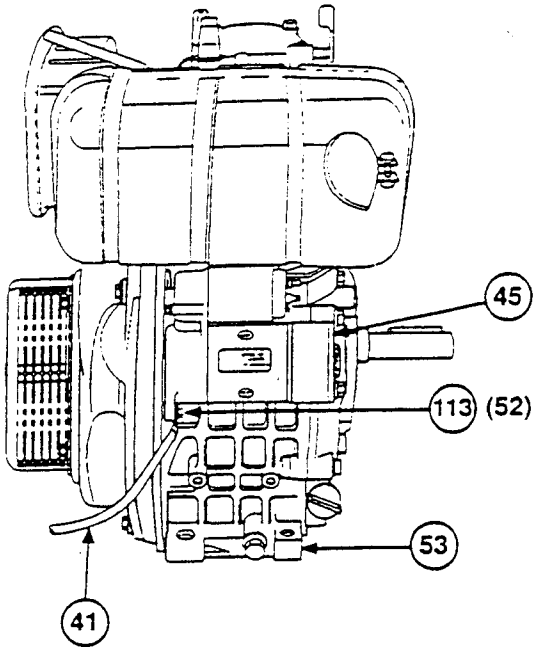
NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

43. Remove two bolts (113), starter (45) and wire assembly (41) from engine (53).



b. **Generator Set Assembly After Modification (Using Diesel Engine)**

1. Install starter (45) and wire assembly (41) on engine (53) with two bolts (113).

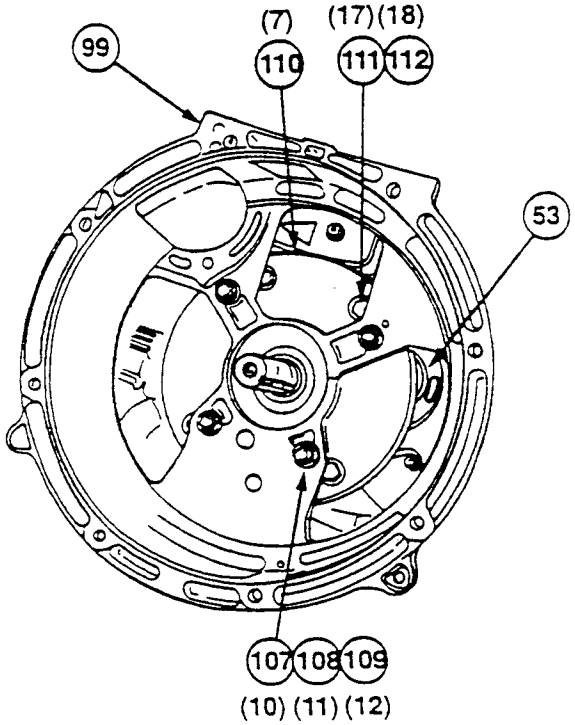


NOTE

Before installation, wrap all threaded pipe joints with antiseizing tape.

2. Apply Loctite 242 to four screws (111). Install adapter plate (110) (with counterbored holes facing away from engine) on engine (53) with four screws (111) and new lockwashers (112). Tighten screw.

3. Install adapter housing (99) on adapter plate (110) with four screws (107), washers (108), and new lockwashers (109). (If adapter housing is equipped with starter plate, reinstall starter plate with existing hardware.)



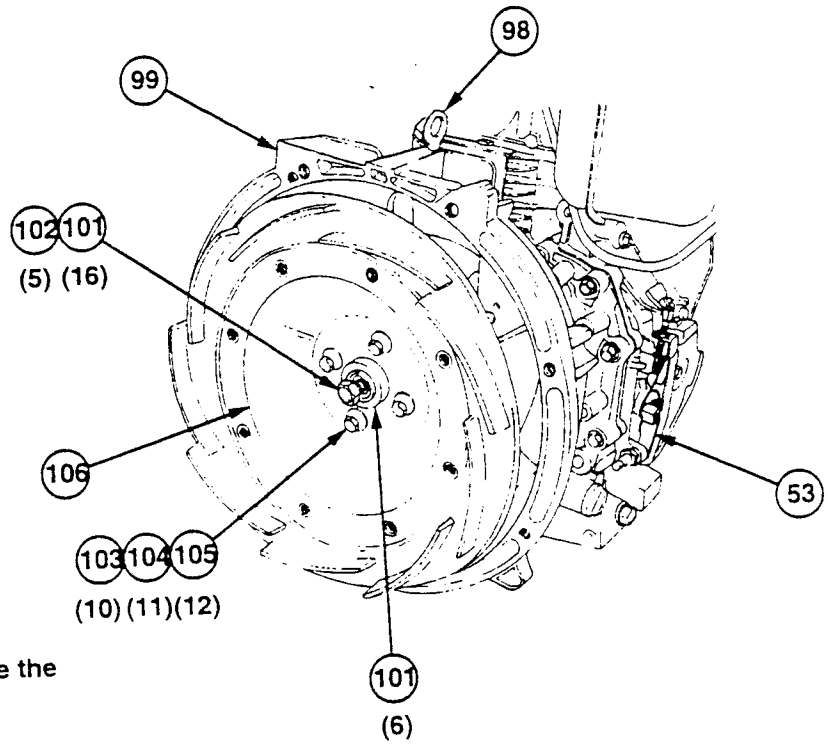
NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

4. Install fan rotor housing (106) on shaft adapter (101) with four screws (103), washers (104), and new lockwashers (105). Tighten screws in opposing pattern, and torque to 20 ft-lb ± 5 ft-lb.

NOTE

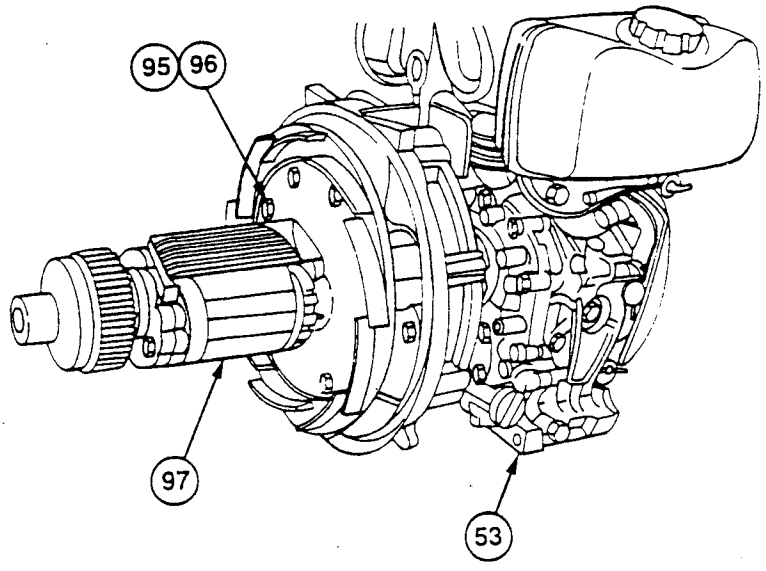
Apply Loctite before installing screw.

5. Install shaft adapter (101) on engine (53) with retainer (102) and screw (100). Torque between 49 and 54 ft-lb.

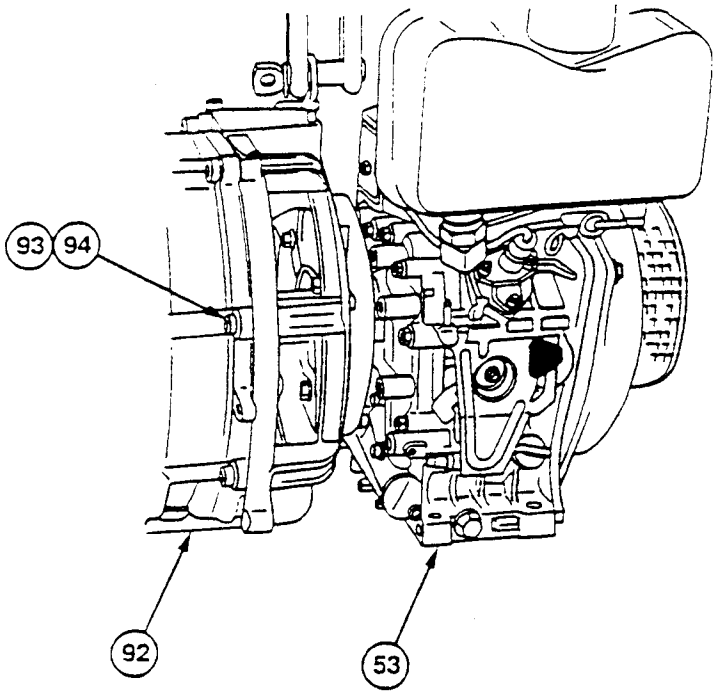


NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

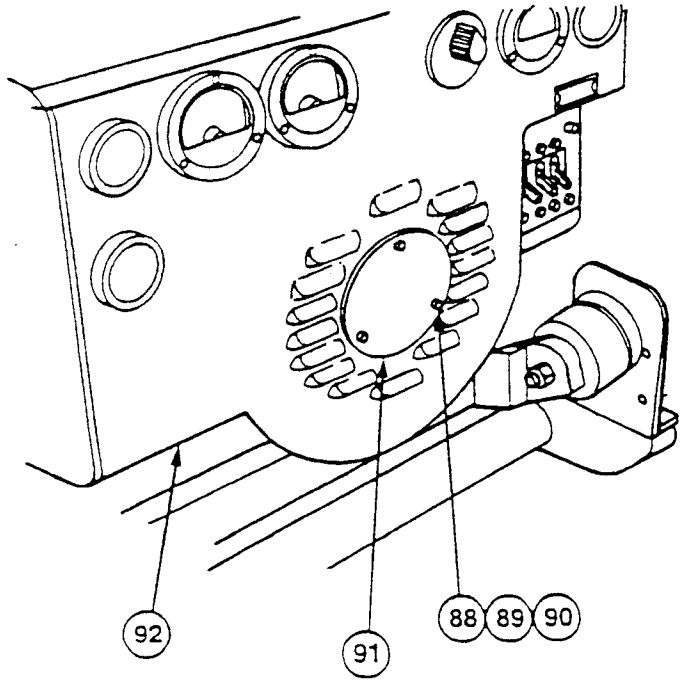
6. Install eyehook (98) in top of adapter housing (99).



8. Using suitable lifting device, install engine (53) in generator housing (92) with eight socket-head screws (93) and new lockwashers (94).



9. Install access cover (91) (if equipped) on generator housing (92) with three screws (88), new lockwashers (89), and washers (90).



10. Install information plate (87) on bracket (64) with two new drive screws (86).

11. Install connector assembly (43) on bracket (64) with four screws (85), eight washers (84), four new lockwashers (83), and nuts (82). Be sure the negative terminal is up and the positive terminal (71) is down.

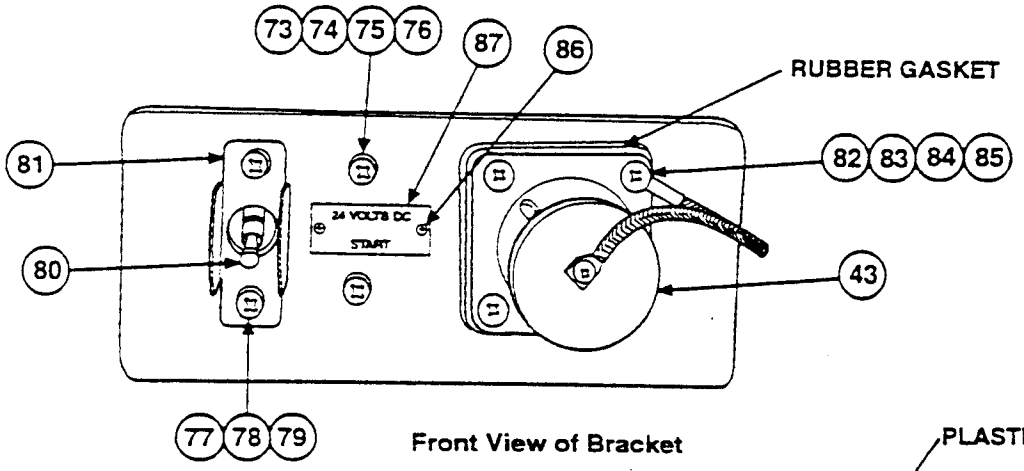
12. Install switch (80) and switch guard (81) on bracket (64) with two screws (77), new lockwashers (78), and washers (79). Make sure switch connector (69) marked 2 is up.

13. Install circuit breaker (32) on bracket (64) with two screws (76), washers (74), new lockwashers (75), and nuts (73).

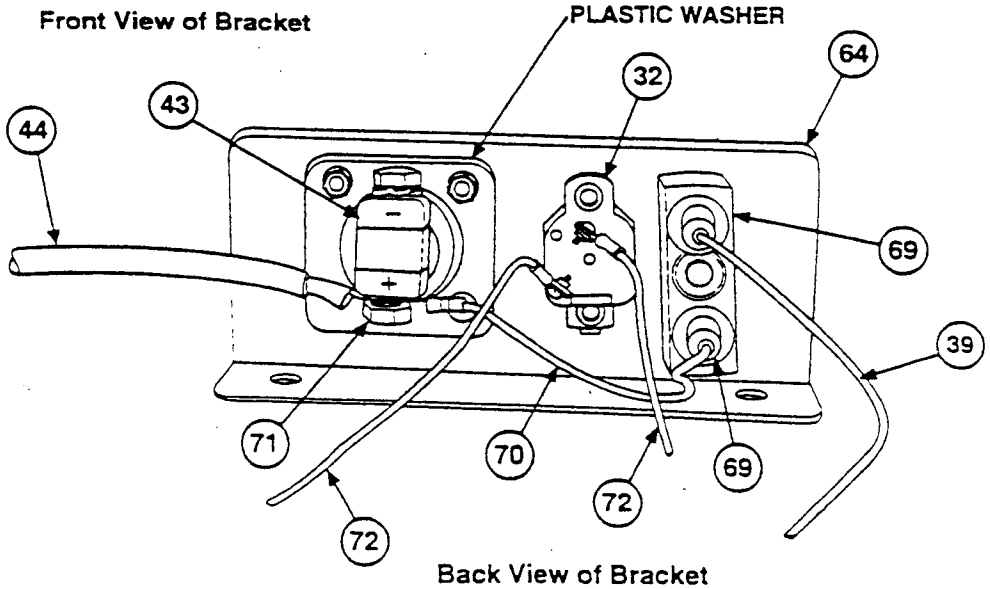
14. Install two wire assemblies (72) on circuit breaker (32).

15. Install wire assembly (70) and wire assembly (44) on positive terminal (71) on connector assembly (43). Install other end of wire assembly (70) on switch connector (69) marked 1.

16. Install wire assembly (39) on switch connector (69) marked 2.

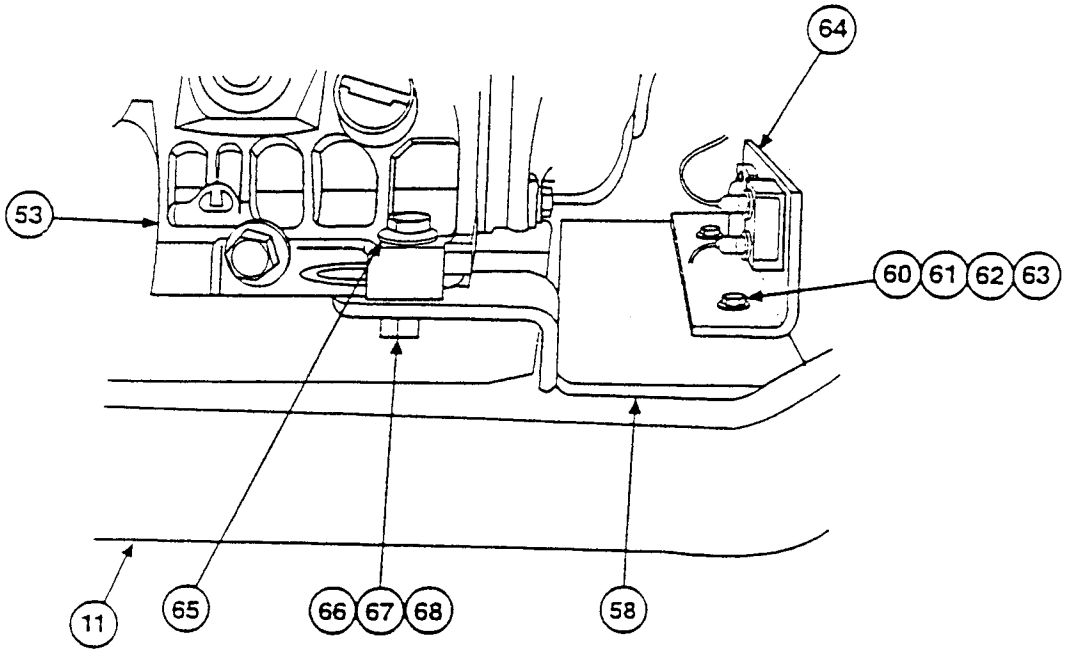


Front View of Bracket



Back View of Bracket

17. Install front engine mounting bracket (58) on engine (53) with two screws (65), washers (68), new lockwashers (66), and nuts (67). Install bracket (64) on engine mounting bracket (58) and inner frame (11) with two screws (60), washers (61), new lockwashers (62), and nuts (63).



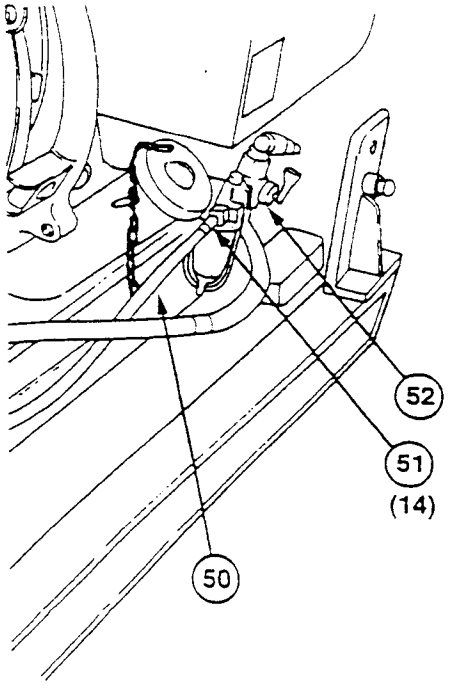
NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

NOTE

Apply Teflon tape to threaded portion of fitting before installation.

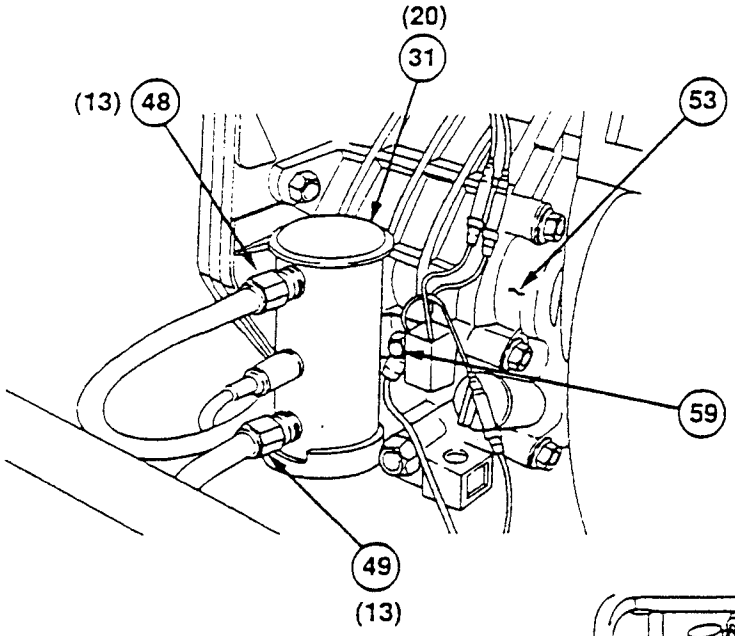
18. Install hose fitting (51) on outlet of fuel strainer (52).

19. Install fuel tank fuel line (50) on fuel strainer (52).



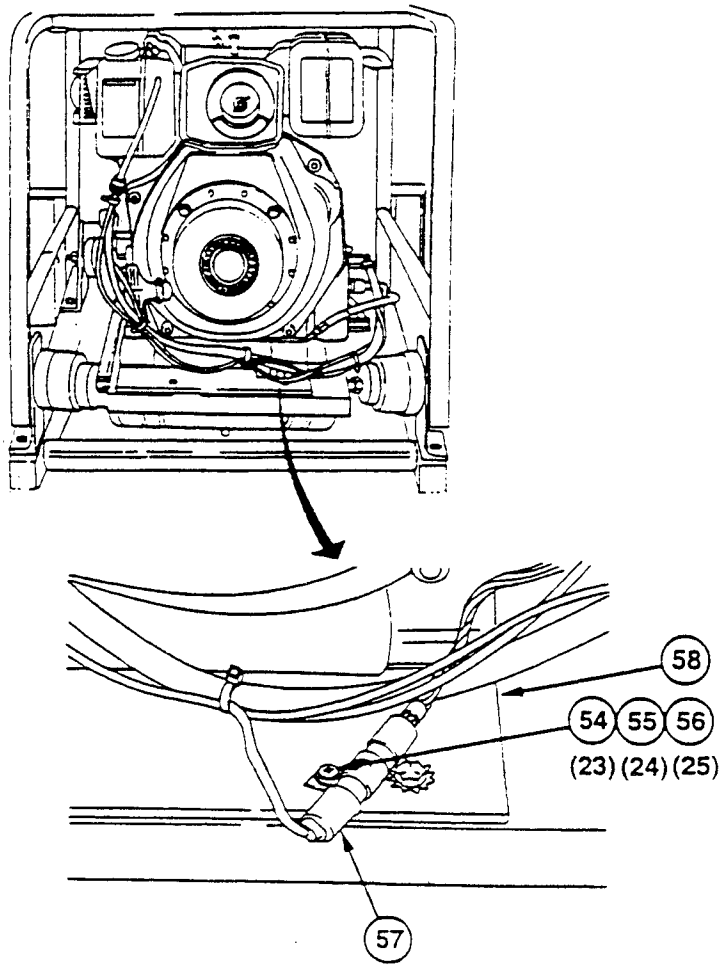
20. Install electrical fuel pump (31) on side of engine (53) with two screws (59) (supplied with new engine).

21. Install two hose fittings (47 and 48) on electrical fuel pump (31).



NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

22. Secure fuel pump ground lead (57) to front engine mounting bracket (58) with screw (54), washer (55), and new lockwasher (56).

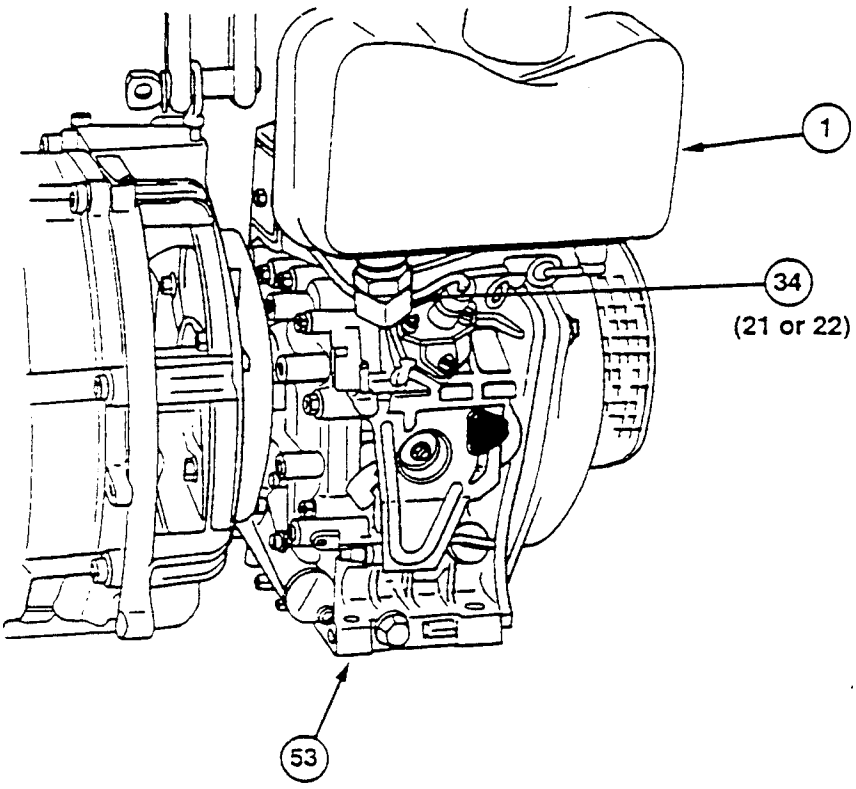


NOTE

Apply Teflon tape to threaded portion of float switch before installation.

23. Install float switch (34) in upper fuel tank (1) and tighten.

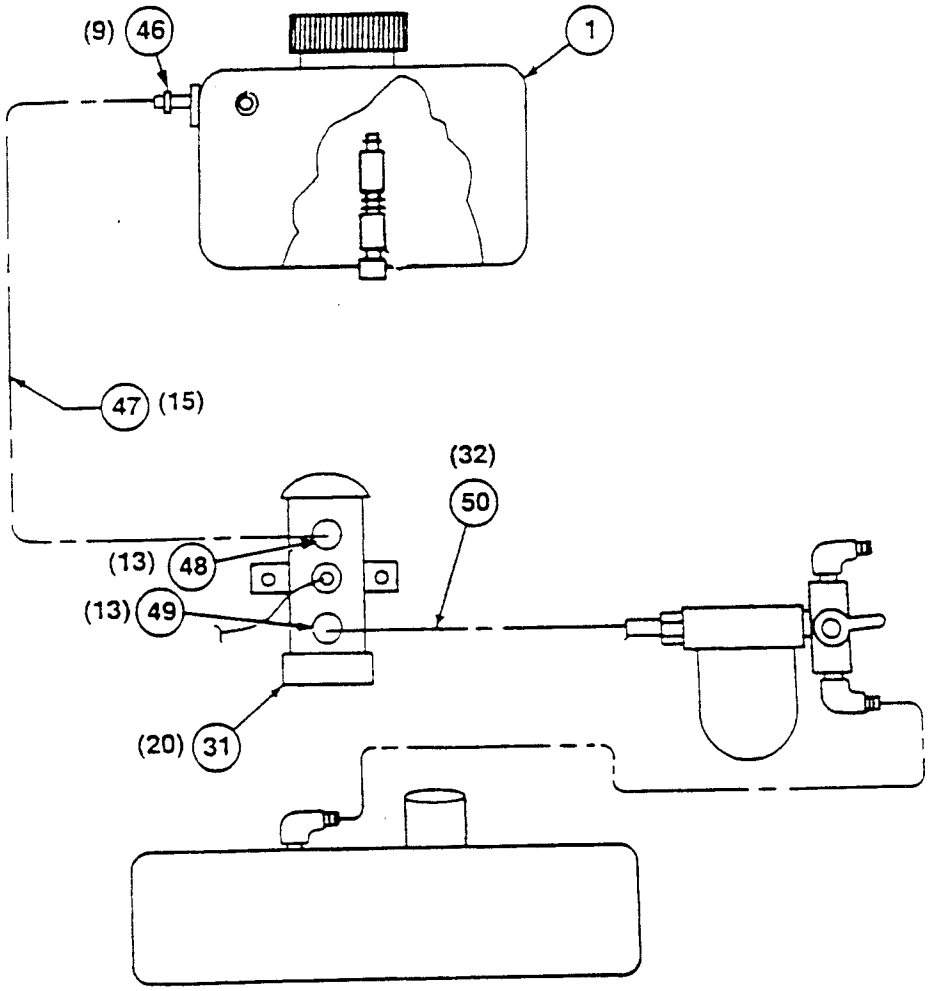
24. Install upper fuel tank (1) on engine (53).



NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

25. Install fuel tank fuel line (50) on hose fitting (49) on electrical fuel pump (31).

26. Install fuel line (47) on upper fuel tank (1) and secure with new hose clamp (46). Install fuel line (47) on hose fitting (48) on electrical fuel pump (31).

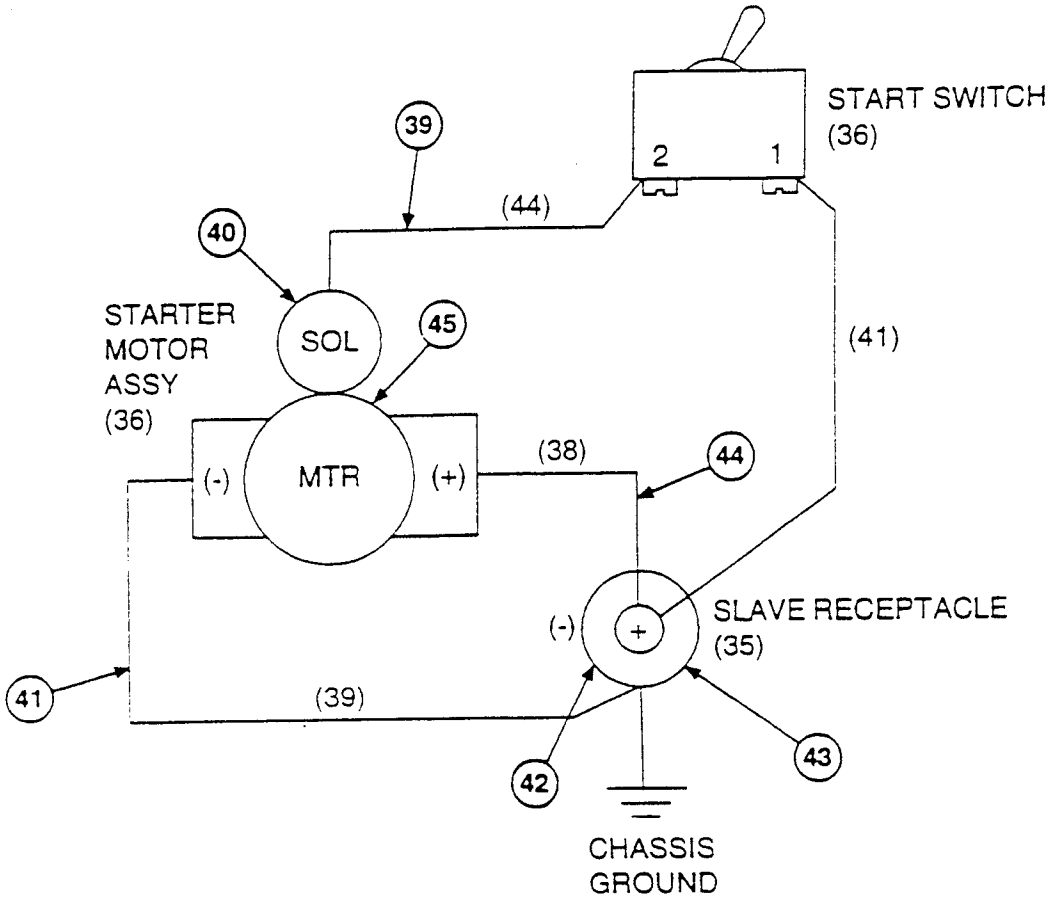


NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

27. Install wire assembly (44) on positive terminal on starter (45).

28. Install wire assembly (41) on negative terminal (42) on connector assembly (43).

29. Install wire (39) on solenoid (40).



NOTE

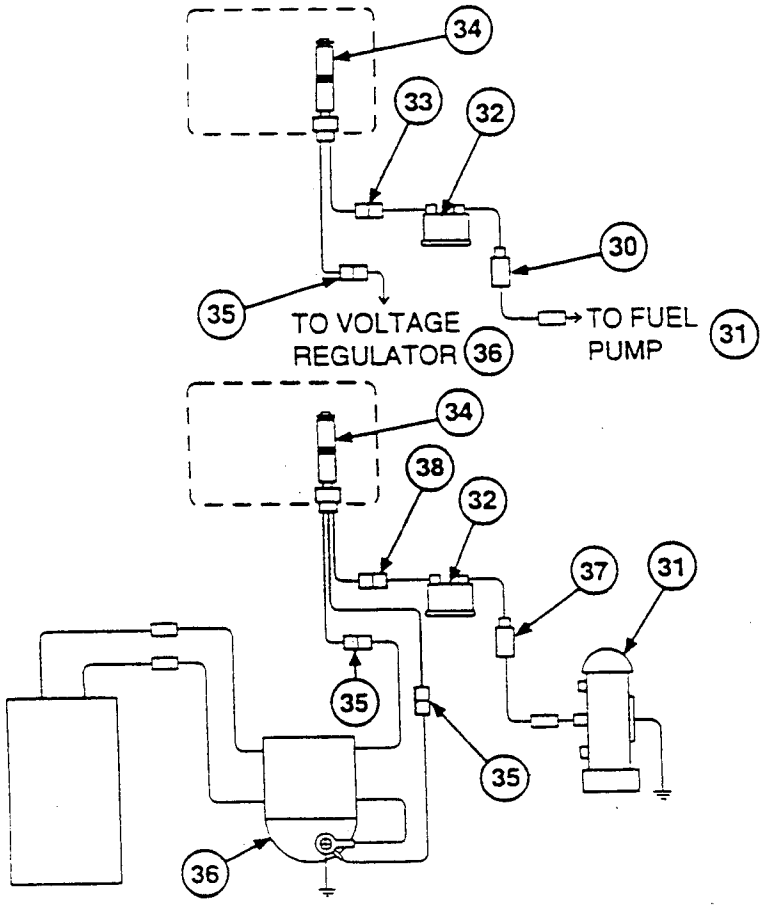
If float switch has two wires, do steps 30 and 31. If float switch has three wires, do steps 32 and 33.

30. Connect electrical connector (35) between float switch (34) and voltage regulator (36).

31. Connect electrical connector (30) between electrical fuel pump (31) and circuit breaker (32). Connect electrical connector (33) between circuit breaker (32) and float switch (34). Go to step 34.

32. Connect two electrical connectors (35) between float switch (34) and voltage regulator (36).

33. Connect electrical connector (37) between electrical fuel pump (31) and circuit breaker (32). Connect electrical connector (38) between circuit breaker (32) and float switch (34).



34. Install lower fuel tank (3) in inner frame (16) and secure with two straps (15), four washers (14), new lockwashers (13), and nuts (12).

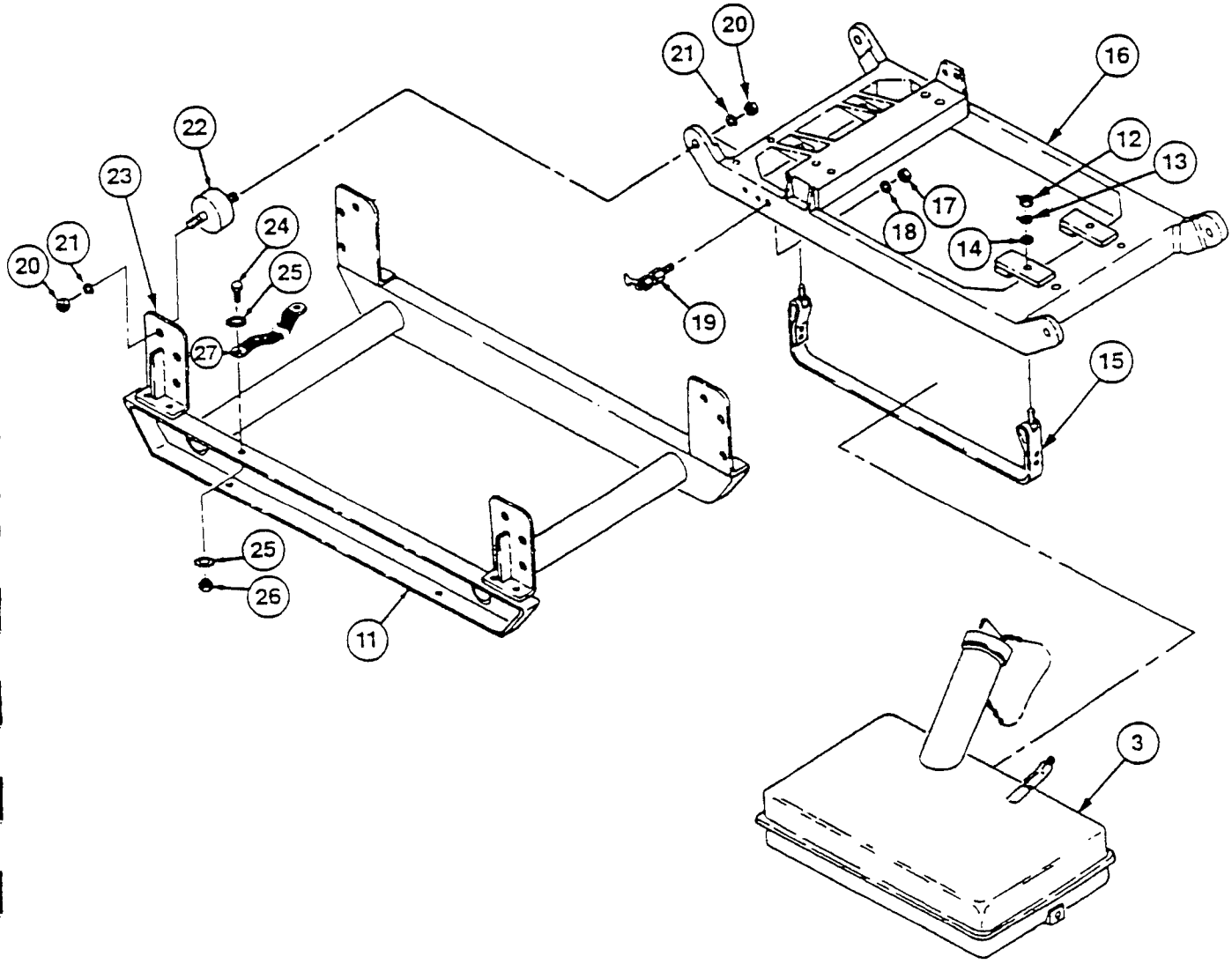
NOTE

Disregard step 35 if plastic fuel tank is used.

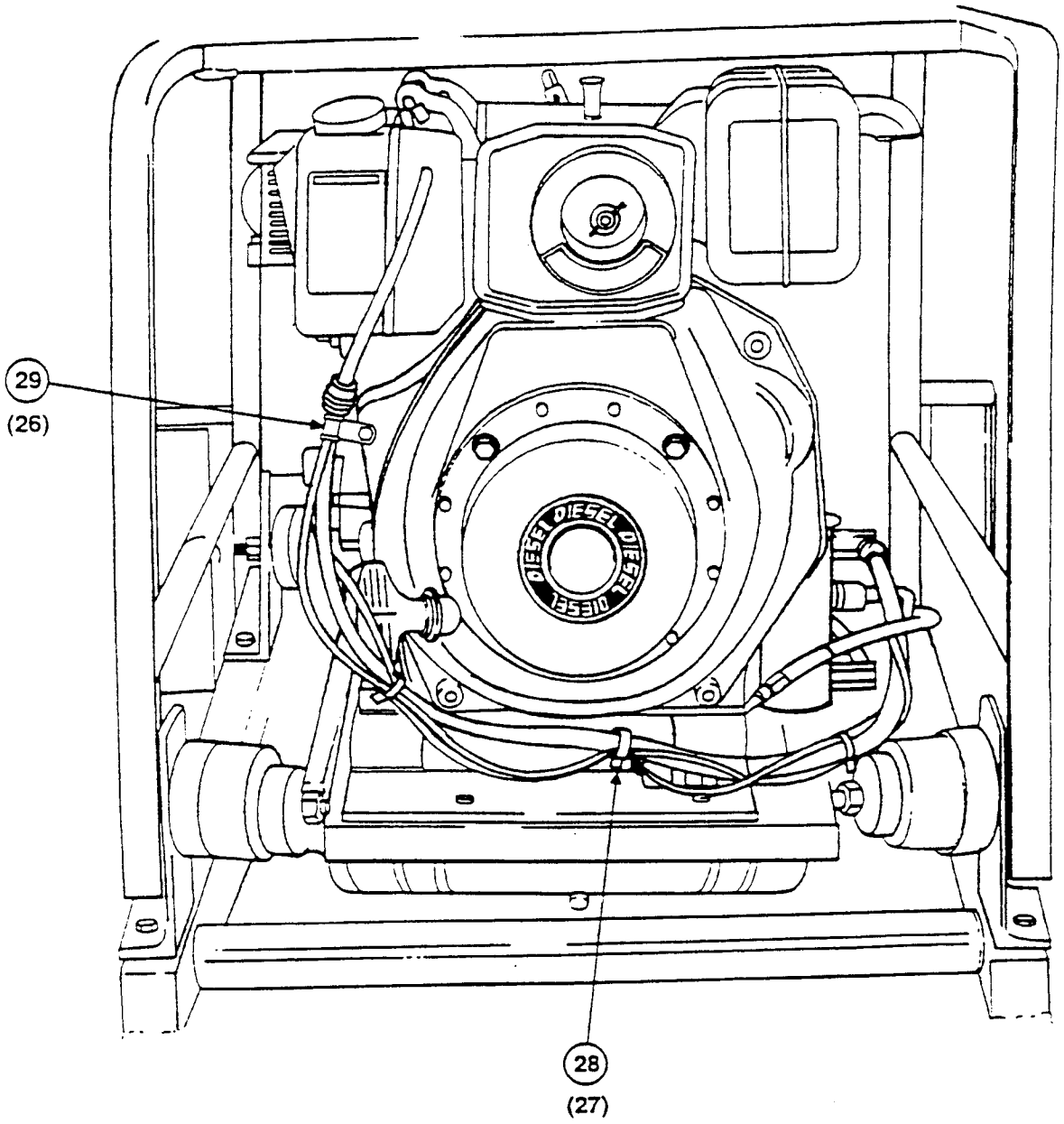
35. Install ground lead (27) on outer frame (11) and fuel tank (3) with two screws (24), four new lockwashers (25), and two nuts (26).

36. Install four inner frame vibration pads (22) on inner frame (16) and four modified corner support brackets (23) with eight nuts (20) and new lockwashers (21).

37. Install load ground terminal (19) on inner frame (16) with new lockwasher (18) and nut (17).



38. Crimp connection when applicable, and route wiring and hose using tiedown straps (28) and clamp (29).



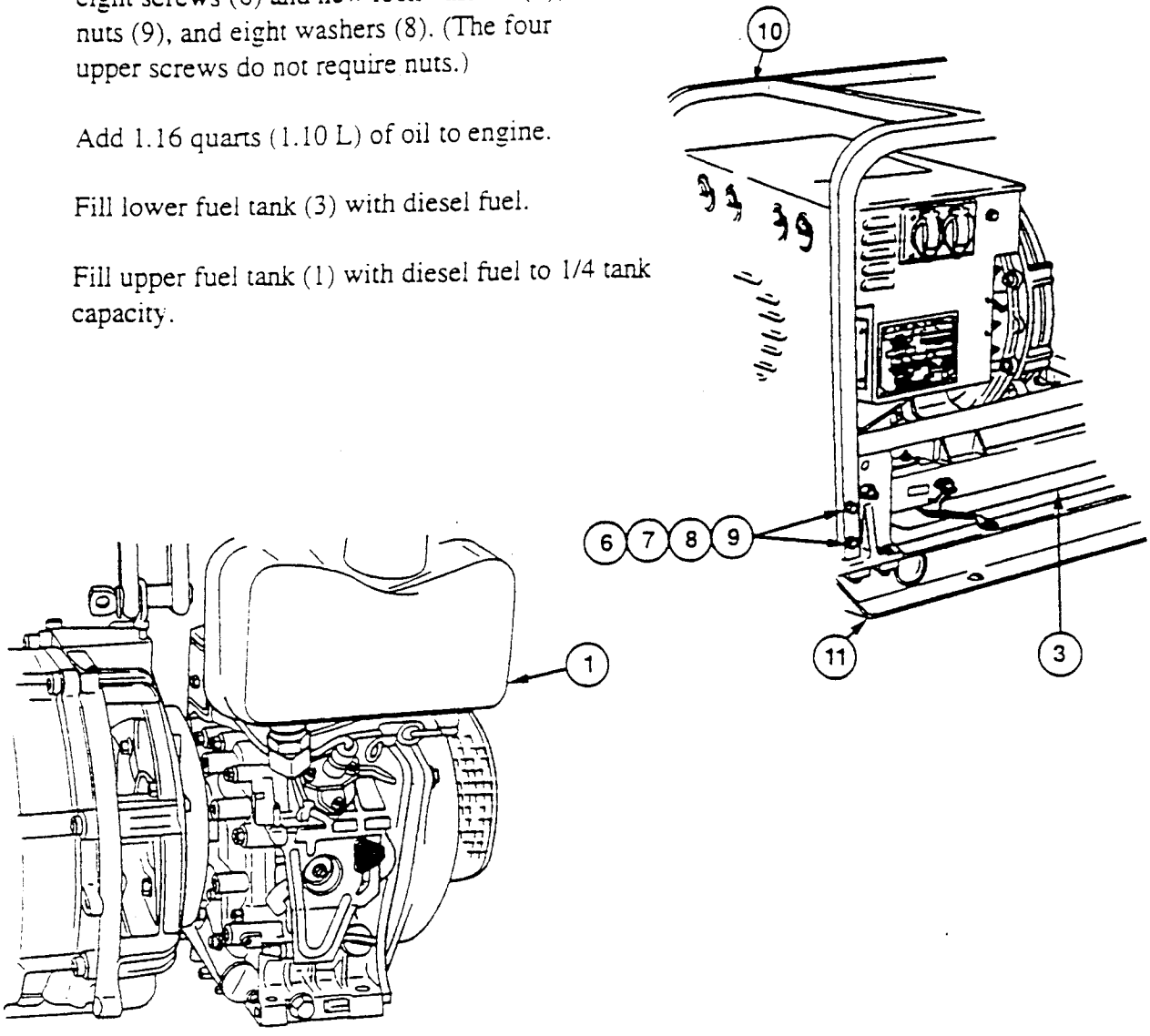
NOTE: The numbers in parentheses are the modification kit item numbers listed in Appendix A.

39. Install top frame (10) on outer frame (11) with eight screws (6) and new lockwashers (7), four nuts (9), and eight washers (8). (The four upper screws do not require nuts.)

40. Add 1.16 quarts (1.10 L) of oil to engine.

41. Fill lower fuel tank (3) with diesel fuel.

42. Fill upper fuel tank (1) with diesel fuel to 1/4 tank capacity.



43. Perform generator set engine maintenance check in accordance with operator's manual for Yanmar diesel engine.

NOTE

If voltage regulator is identified by federal stock number (FSN) 2920-299-0637, go to page 28, "Voltage Regulator Replacement." If voltage regulator is identified by national stock number (NSN) 6110-00-746-7621, go to page 29.

c. Voltage Regulator Replacement

1. Disassembly

   a. Remove generator set control box cover, not shown.

   b. Remove and retain voltage regulator mounting fasteners (1).

   c. Tag and disconnect all wires (2) from voltage regulator terminals (3).

   d. Remove voltage regulator (4) and dispose of it in accordance with Government disposition regulations.

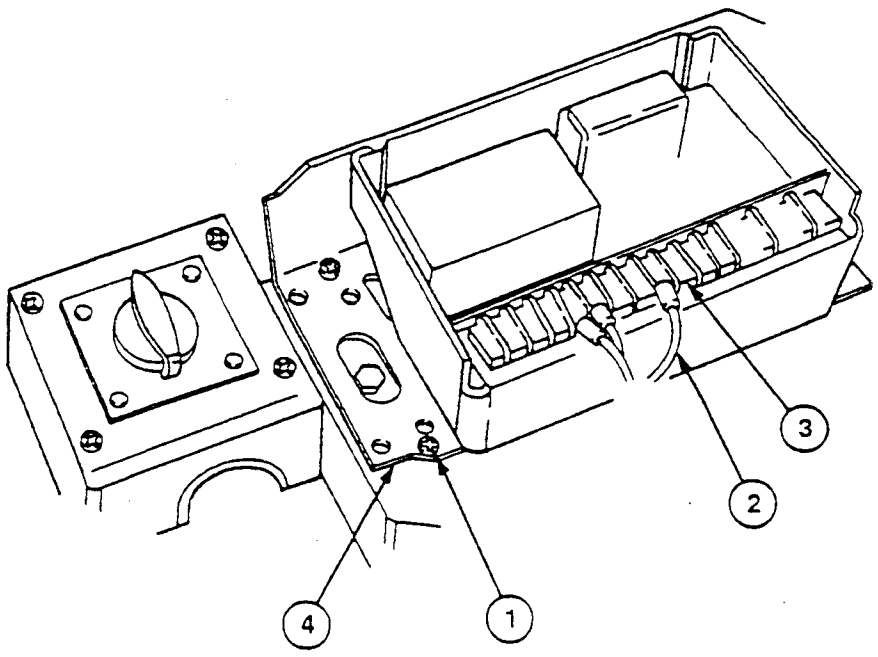
2. Assembly

   a. Follow wiring instructions on voltage regulator data plate to reconfigure new voltage regulator (4) by rewiring red, black, and white wires to conform to generator configuration.

   b. Install voltage regulator (4) using voltage regulator mounting fasteners (1) retained in disassembly.

   c. Connect all wires (2) to voltage regulator terminals (3). Use tags for proper placement.

   d. Replace generator set control box cover, not shown.



d. Generator Set Function Check (Use Test Data Sheet, p. 29)

1. Load bank installation:

   a. Connect load bank to generator set.
   b. Set all load switches to the off position.

2. Start generator set in accordance with generator starting procedure.

3. After generator set is sufficiently warmed up, perform functional checks a through c in accordance with test data sheet.

   a. Voltage
   b. Frequency
   c. Percentage load – using load bank, load generator set as follows:
      - 25%
      - 50%
      - 75%
      - 100%
   d. Load duration shall be no longer than five minutes.
   e. Record the test results on the Test Data Sheet (p. 29).

TEST DATA SHEET

FUNCTIONAL AND OPERATIONAL TEST

Item_____ Date_____

_____ Engineer_____

_____

Serial No._____

1. Electrical Control Box Functional Test:	YES	NO	COMMENTS
• voltage selector switch	____	____	_____
• current selector switch	____	____	_____
• frequency adjust	____	____	_____
• percent load meter	____	____	_____
• voltage meter	____	____	_____
• frequency meter	____	____	_____
• voltage adjust	____	____	_____
• circuit breaker	____	____	_____

2. Operational Test (Load Bank Hookup):	YES	NO	COMMENTS
• voltage at 28/120/240	____	____	_____
• frequency 60/400 Hz	____	____	_____
• load duration			
- 25%	____	____	_____
- 50%	____	____	_____
- 75%	____	____	_____
- 100%	____	____	_____

3. Comments:

APPENDIX A. MODIFICATION KIT PARTS LIST

Table. Modification Kit Parts List

Item	Qty.	Description	Part Number
1	1	Engine, Diesel, Yanmar, 6.1 HP w/114268-13500 Muffler, 114288-13800 Deflector, and 160910-77350 Rectifier	30554-96-13014
2	1	Plate, Data, MWO	30554-96-13000
3	1	Plate, Data, Instruction	30554-96-13012
4	1	Regulator, Voltage	13219E0883
5	1	Retainer, Adapter, Shaft	30554-96-13004
6	1	Adapter, Shaft	30554-96-13006
7	1	Plate, Adapter, Engine/Alternator	30554-96-13005
8	1	Mounting Bracket, Engine, Yanmar	30554-96-13009
9	1	Clamp, Hose, Low-Pressure	MS35842-10
10	8	Screw, Cap, Hexagon Head, Grade 8 Stainless Steel, 5/16 - 18 x 1-1/4	MS18154-35
11	8	Washer, Flat–Metal, Round, General Purpose, 0.344 Basic	MS15795-812
12	8	Washer, Lock—Spring, Helical, Regular, 0.312 Nominal Size	MS35338-140
13	2	Fitting, Hose, Female Pipe to Hose (Parker) 1/4 NPTF x 1/4 ID Hose	26-6-4
14	1	Fitting, Hose, 1/8 NPT to Hose (Aero Quip)	4738-2-4B
15	1	Hose, 0.250 ID x 44.00 L (Parker) (Make from P/N H234 1-4)	SAE-3OR3-44
16	1	Screw, Cap, Hex Head, 7/16-20 UNF-2A x 1 1/4 L, Grade 8 (McMaster-Carr)	B1821BH025C125N
17	4	Screw, Cap, Hexagon Head, Class 10.9 M8-1.25 mm x 30.00 mm L (McMaster-Carr)	10501882
18	4	Washer, Lock—Spring, Helical Regular, M8 Nominal Size (McMaster-Carr)	127-M8

Table. Modification Kit Parts Kit (continued)

Item	Qty.	Description	Part Number
19	10	Screw, Drive, Round Head, No. 4	MS21318-20
20	1	Pump, Fuel, Electrical, 24 V dc, 25 gph	MS51321-2-24-2
21	1	Switch, Float (Madison)—See Note	M4502-4881
22	1	Switch, Float (GEM)—See Note	168635
23	1	Screw, Pan Head, Cross Recessed, 0.164-32 UNC-2A x 0.25 L	MS51957-43
24	3	Washer, Flat—Metal, Round, General Purpose, 0.188 Basic	MS15795-841
25	3	Washer, Lock—Spring, Helical, Regular, 0.164 Nominal Size	MS35338-137
26	1	Clamp, Loop Type, Cushioned, Support, 1.0 in. ID (McMaster-Carr)	MS21333-77
27	10	Strap, Tiedown	MS3367-2-9
28	2	Screw, Cap, Hexagon Head, Grade 8, 3/8-16 UNC-2A x 1.50 in. L	MS18154-36
29	2	Washer, Flat—Metal, Round, General Purpose, 0.406 Basic	MS15795-814
30	2	Washer, Lock—Spring, Helical, Regular, 3/8 in. Nominal Size	MS35338-141
31	2	Nut, Hexagon, 3/8-16 UNC-2B	MS35649-2384
32	1	Hose, 0.250 ID x 14.00 L (Parker) (Make from P/N H234 1-4)	SAE-3OR3-14
33	4	Insert, CRES Helical Coil, 3/8-16 UNC, 1.0 Diameter Nominal Length	MS122083
34	1	Starter, 24 VDC	1144362-77019
35	1	Connector Assembly (Nato Plug)	11674728

NOTE: Items 21 and 22 are interchangeable components; see pages A-16 and A-17 for installation.

Table. Modification Kit Parts Kit (continued)

Item	Qty.	Description	Part Number
36	1	Switch, Electrical	MS39061-2
37	1	Bracket, Starter/CB Assembly	96-13018
38	1	Wire Assembly, P1 to Starter	96-13017-1
39	1	Wire Assembly, P1 to GND	96-13017-2
40	1	Wire Assembly, CB to Fuel Pump	96-13017-3
41	1	Wire Assembly, Starter Switch (1) to P1	96-13017-4
42	1	Plate, Information (24 Volts DC Start)	96-13019
43	1	Circuit Breaker, 10 Amps	PDA-10
44	1	Wire Assembly, Starter Switch (2) to Starter Sol.	96-13017-5
45	1	Wire Assembly, CB to Float Switch	96-13017-6
46	2	Screw, Pan Head, Cross Recessed, .164-32 x .500 L	MS51957-45
47	6	Screw, Pan Head, Cross Recessed, .190-32 x .750 L	MS51958-65
48	6	Washer, Flat-Metal, Round, General Purpose, .219 Basic	MS15795-842
49	6	Washer, Lock-Spring, Helical, Regular, .190 Nominal Size	MS35338-138
50	6	Nut, Plain-Hexagon, Machine Screw, .190-32 UNC-2B	MS35650-304
51	1	Guard, Switch	116712135
52	2	Screw, Hexagon Head, 10 mm-1.5 x 30 mm L	DS51474A10030
53	2	Screw, Cap, Hexagon Head, 5/16-18 UNC-2A x 2.50 L	B1821BH031C250D

APPENDIX B. CROSS-REFERENCE INDEX

Table. Cross-Reference Index

Nomenclature	Technical Manual/ Paragraph*	Yanmar Section
Air Cleaner (Change)	3-12	9-3
Air Cleaner (Service)	3-12	5-3
Air Cleaner Cover (Service)	3-12	5-3
Air Cleaner Element (Change)	3-12	9-3
Air Cleaner Element (PMCS)	4-10	9
Air Cleaner Element (Service)	3-12	5-3
Battery (Charging)	3-4	9-7
Battery (Electric Starting)	2-1	6-2
Battery (Engine Electrical Wiring)	6-1	3-5
Battery (PMCS)	4-10	9
Battery (Troubleshooting)	5-3	12
Bearing (Engine)	—	5-2
Camshaft PTO [S Type] (Engine Belt-Pull Angle)	6-1	3-3
Crankshaft PTO [D Type] (Engine Belt-Pull Angle)	6-1	3-3
Cylinder Liner (Engine)	—	5-2
Decompression Lever (Engine Stopping)	2-1	8
Decompression Lever (Manual Starting)	2-1	6-1
Decompression Lever (Storage)	1-7	10
Diffuser Discs (Spark Arrester)	4-31	9-5
Dipstick (Engine)	—	5-2
Drain Plug (Engine)	4-36, TM 5-2805-203-14	9-1
End Cap (Spark Arrester)	4-31	9-5
Engine Speed Lever (Electrical Starting)	2-1	6-2
Engine Speed Lever (Engine Stopping)	2-1	8
Engine Speed Lever (Manual Starting)	2-1	6-1
Exhaust Silencer (Muffler)	4-31	9-5
Exhaust Valve (Fuel)	3-11	9-6
Exhaust Valve (PMCS)	4-10	9
Filler Cap (Fuel Oil)	3-14	5-1
Fixing Bolt (Oil Filter)	4-36, TM 5-2805-203-14	9-2
Fuel (PMCS)	4-10	9
Fuel (Troubleshooting)	5-3	12
Fuel Cock (Clean/Replace)	4-29	9-4
Fuel Cock (Electric Start)	2-1	6-2
Fuel Cock (Manual Start)	2-1	6-1
Fuel Cock (Troubleshooting)	5-3	12
Fuel Cock Lever (Stopping Engine)	2-1	8
Fuel Filter (Clean/Replace)	4-29	9-4
Fuel Filter (PMCS)	4-10	9

* Each paragraph cited in this column is from TM 5-6115-271-14 unless otherwise noted.

Table. Cross-Reference Index (continued)

Nomenclature	Technical Manual/ Paragraph	Yanmar Section
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Fuel Injection Limiting Bolt (Engine)	2-2	7-1
Fuel Injection Nozzle (Fuel Oil Handling)	3-11	5-1
Fuel Injection Nozzle (PMCS)	4-10	9
Fuel Injection Nozzle (Troubleshooting)	5-3	12
Fuel Injection Pump (Fuel Oil Handling)	3-11	5-1
Fuel Injection Pump (PMCS)	4-10	9
Fuel Injection Pump (Troubleshooting)	5-3	12
Fuel Injection Timing (PMCS)	4-10	9
Fuel Tank (Fuel Oil Handling)	4-27	5-1
Fuel Tank (PMCS)	4-10	9
Fuel Tank Filter (Fuel Oil Handling)	3-12	5-1
Fuel Tank Filter Red Plug (Fuel/Oil Handling)	3-12	5-1
Handle Grip (Storage)	1-7	10
High-Pressure Fuel Pipe (Stopping Engine)	2-1	8
High-Pressure Fuel Pipe Nut (Stopping Engine)	2-1	8
Intake Valve (Fuel)	3-11	9-6
Intake Valve (PMCS)	4-10	9
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Oil Filter (Cleaning)	4-36, TM 5-2805-203-14	9-2
Oil Filter (PMCS)	4-10	9-2
Oil Filter (PMCS)	4-10	9
Oil Filter Cap (Change)	4-36, TM 5-2805-203-14	9-1
Oil Filter Cap (PMCS)	4-10	9
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Oil Pan (PMCS)	4-10	9
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Piston (Engine)	3-11	5-2
Piston Ring (Engine)	3-11	5-2
Piston Ring (Fuel)	3-11	9-6
Pulley (Engine)	6-1	3-1
Recoil Handle (Stopping Engine)	2-1	8
Recoil Starter (Manual Starting)	2-1	6-1
Recoil Starter (Troubleshooting))	5-3	12
Recoil Starting Handle Grip (Manual Starting)	2-1	6-1
Revolution Speed Limiting Bolt (Engine Operation)	2-2	7-1
Rocker Arm Cover (Manual Starting)	2-1	6-1
Rocker Arm Cover (Storage)	1-7	10

Table. Cross-Reference Index (continued)

Nomenclature	Technical Manual/ Paragraph	Yanmar Section
Rocker Arm Rubber Plug (Manual Starting)	2-1	6-1
Rubber Plug (Storage)	1-7	10
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Spark Arrester (PMCS)	4-10	9
Spark Arrester (Troubleshooting)	5-3	12
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Starter Motor (Electrical Starting)	2-1	6-2
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Tank (Fuel Filter Clean/Replace)	4-29	9-4
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Valve Rocker Arm Cover (Manual Starting)	2-1	6-1
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Wing Nut (Service Air Cleaner)	3-12	5-3