

4-11. INSTRUMENT CLUSTER REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP:

Tools

General mechanic's tool kit:
automotive (Appendix B, Item 1)

Manual References

TM 9-2320-280-10
TM 9-2320-280-24P

Materials/Parts

Five lockwashers (Appendix G, Item 169)
Antiseize compound (Appendix C, Item 13)

Equipment Condition

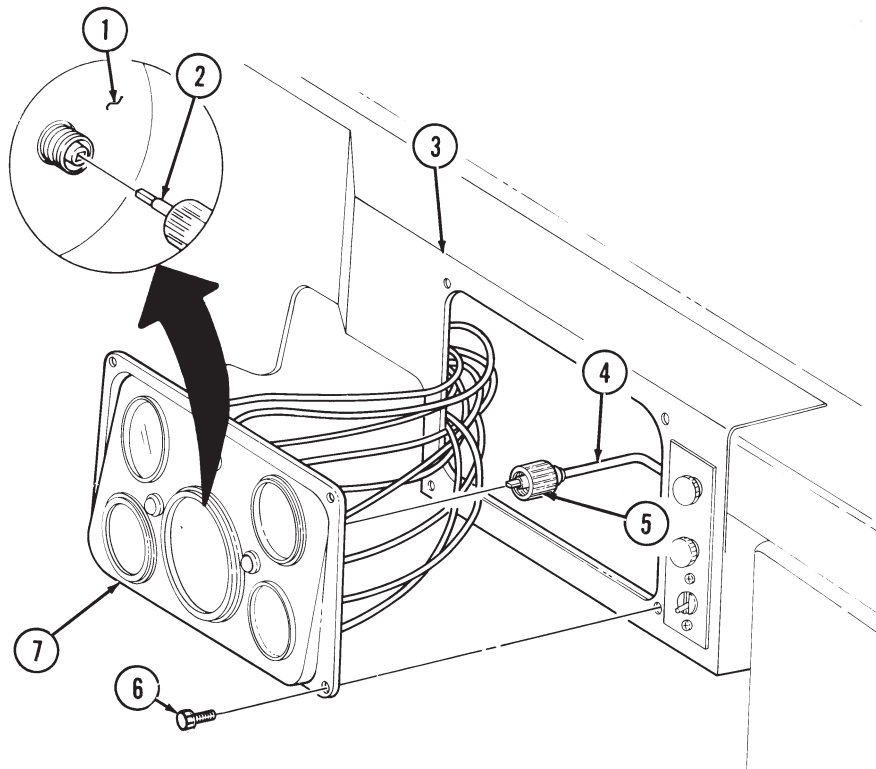
Battery ground cable disconnected (para. 4-73).

NOTE

Prior to removal, tag leads for installation.

a. Removal

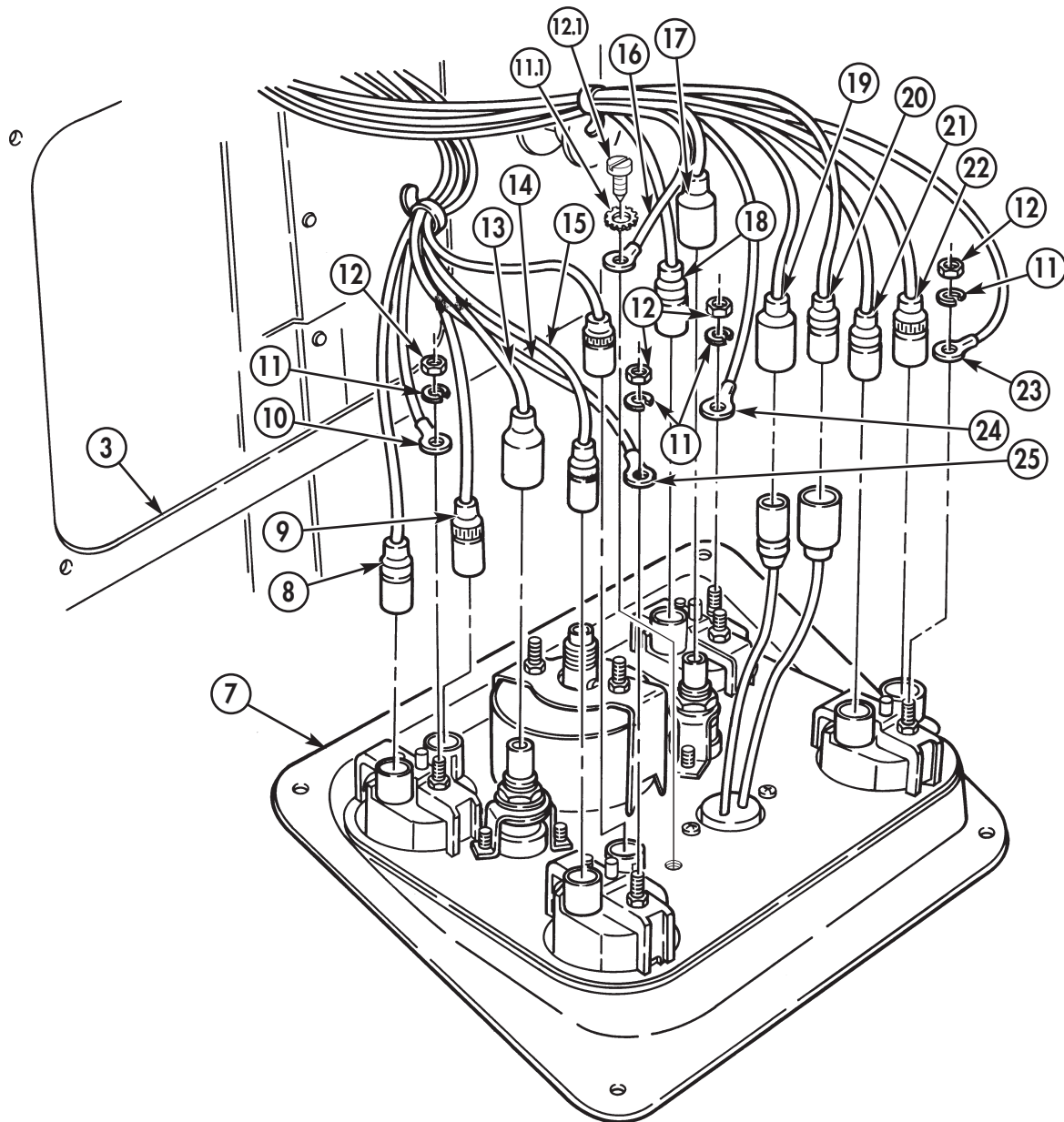
1. Remove four capscrews (6) from instrument cluster (7) and instrument panel (3). Pull instrument cluster (7) away from instrument panel (3) to allow access to speedometer cable (4).
2. Loosen nut (5) and disconnect speedometer cable (4) from speedometer (1).
3. Disconnect harness lead 27J (8), 28A (9), 40B (13), 27H (14), 36A (15), 57L (19), 17B (20), 27G (21), 33A (22), 40C (17), and 567A (18) from instrument cluster (7).
4. Remove four nuts (12), lockwashers (11), and harness ground leads 58H (10), 58G (25), 58E (23), and 58F (24) from instrument cluster (7). Discard lockwashers (11).
5. Remove screw (12.1), lockwasher (11.1), and ground lead 57G (16) from instrument cluster (7) and remove instrument cluster (7).



4-11. INSTRUMENT CLUSTER REPLACEMENT (Cont'd)

b. Installation

1. Apply antiseize compound to harness ground leads 58H (10), 58G (25), 58E (23), and 58F (24) and install on instrument cluster (7) with five lockwashers (11) and nuts (12).
2. Apply antiseize compound to harness ground lead 57G (16) and install on instrument cluster (7) with lockwasher (11.1) and screw (12.1).
3. Connect harness leads 27J (8), 28A (9), 40B (13), 27H (14), 36A (15) 57L (19), 17B (20), 27G (21), 33A (22), 40C (17), and 567A (18) to instrument cluster (7).
4. Connect speedometer cable (4) to speedometer (1) ensuring core (2) engages with square hole in speedometer (1) and secure with nut (5).
5. Install instrument cluster (7) in panel (3) with four capscrews (6).



FOLLOW-ON TASKS: • Connect battery ground cable (para. 4-73).
 • Check operation of instrument cluster components (TM 9-2320-280-10).

4-12. INSTRUMENT PANEL REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP:

Tools

General mechanic's tool kit:
automotive (Appendix B, Item 1)

Equipment Condition

- Instrument cluster removed (para. 4-11).
- Heater control cables remove (para. 10-89).

Manual References

TM 9-2320-280-10
TM 9-2320-280-24P

NOTE

Prior to removal, tag leads for installation.

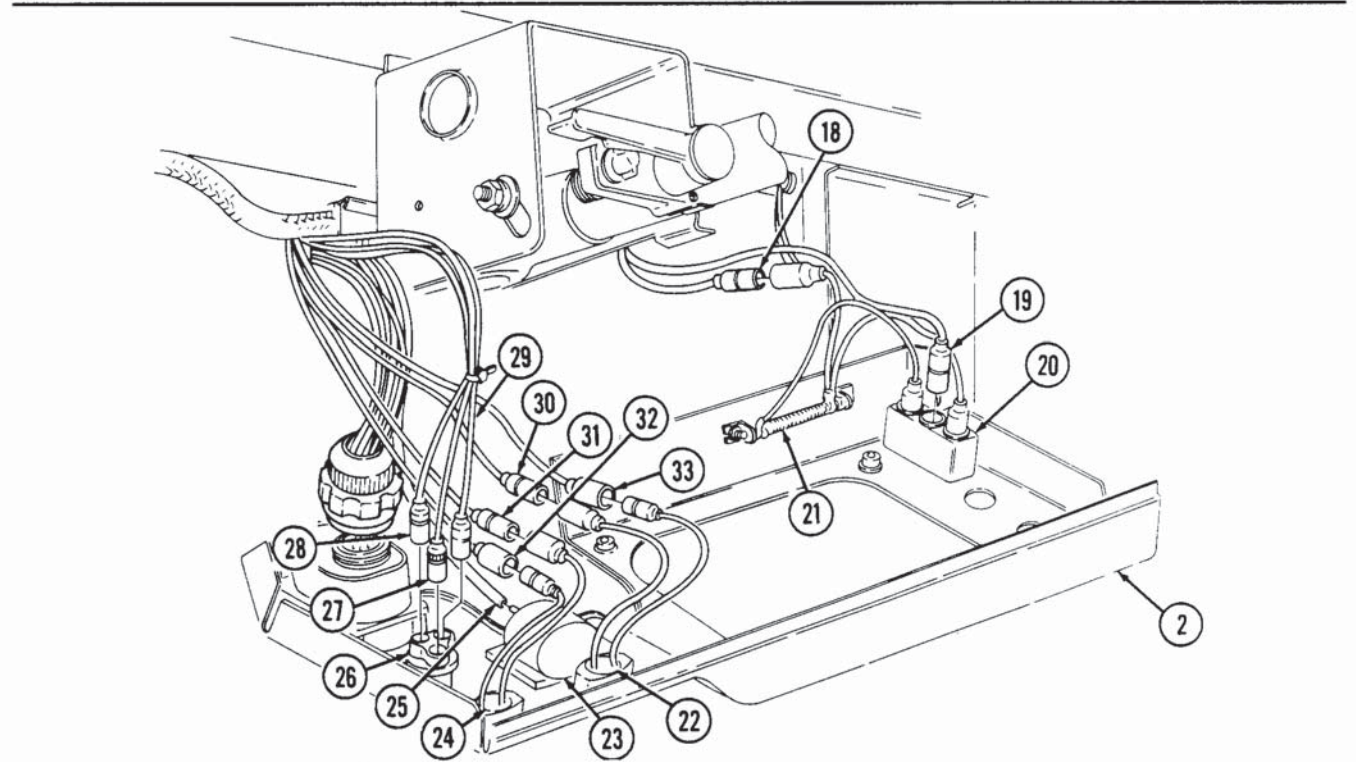
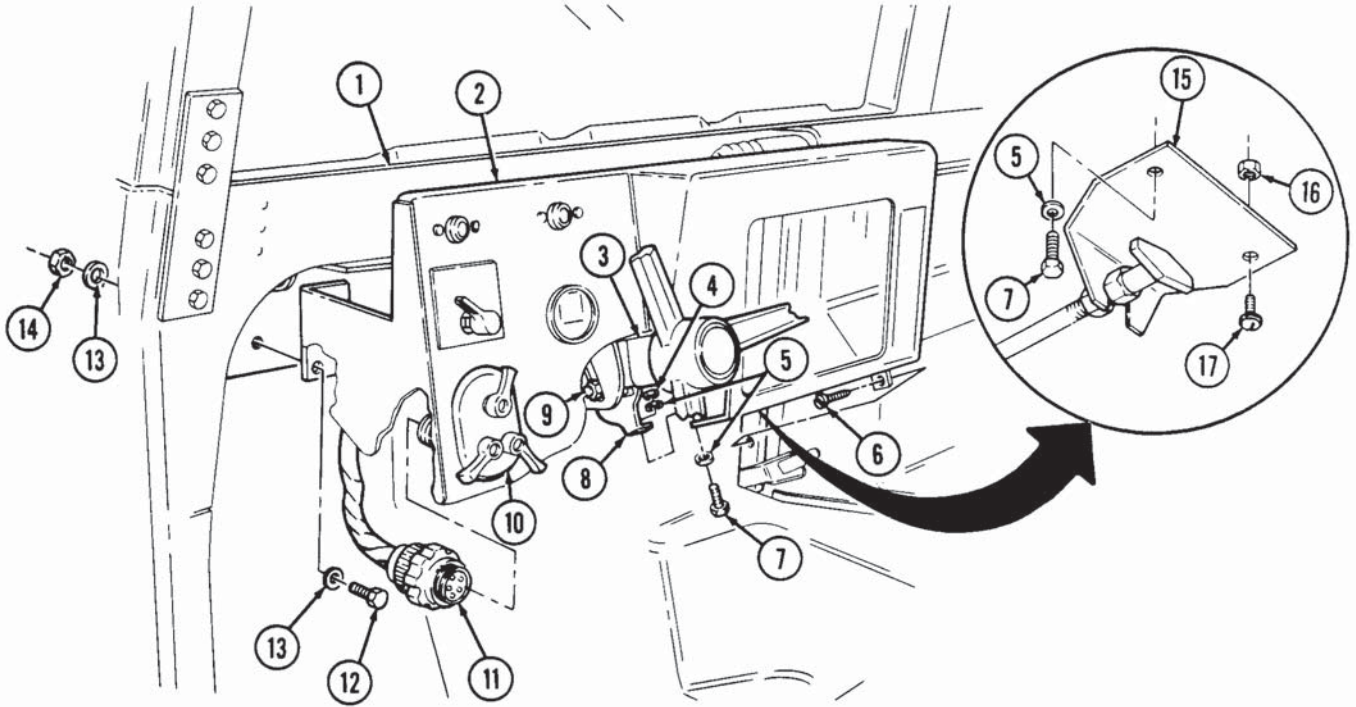
a. Removal

1. Loosen nut (9) and lower steering column (3).
2. Remove cannon plug (11) from main light switch (10).
3. Remove two capscrews (12), washers (13), nuts (14), and washers (13) from instrument panel (2) and body (1).
4. Remove nut (16) and screw (17) from hand throttle bracket (15) and instrument panel (2).
5. Remove nut (4), washer (5), capscrew (7), washer (5) and hand throttle bracket (15) from steering column bracket (8) and instrument panel (2).
6. Remove screw (6) from instrument panel (2) and body (1).
7. Pull instrument panel (2) away from body (1).
8. Disconnect two harness leads 11A (28), 14A (29), and 27A (27) from rotary switch (26).
9. Disconnect two harness leads 27F (32) and 571A (31) at wait-to-start indicator light (24).
10. Disconnect two harness leads 27L (30) and 67D (33) at brake warning indicator light (22).
11. Disconnect harness lead 400 D (18) from resistor (21).
12. Disconnect harness lead 27E (19) from blower switch (20) and remove instrument panel (2).
13. Disconnect hose (25) from air restriction gage (23).

b. Installation

1. Connect hose (25) to air restriction gage (23).
2. Connect harness lead 27E (19) to blower switch (20).
3. Connect harness lead 400D (18) to resistor (21).
4. Connect two harness leads 27L (30) and 67D (33) to brake warning indicator light (22).
5. Connect two harness leads 27F (32) and 571A (31) to wait-to-start indicator light (24).
6. Connect three harness leads 11A (28), 14A (29), and 27A (27) to rotary switch (26).
7. Install instrument panel (2) on body (1) with screw (6).
8. Install instrument panel (2) and hand throttle bracket (15) to steering column bracket (8) with washer (5), capscrew (7), washer (5), and nut (4).
9. Install hand throttle bracket (15) to instrument panel (2) with screw (17) and nut (16).
10. Install instrument panel (2) to body (1) with two washers (13), capscrews (12), and washers (13), and nuts (14).
11. Install cannon plug (11) to main light switch (10).
12. Raise steering column (3) and tighten nut (9) to 31 lb-ft (42 N•m).

4-12. INSTRUMENT PANEL REPLACEMENT (Cont'd)



- FOLLOW-ON TASKS:
- Install heater cables (para. 10-89).
 - Install instrument cluster (para. 4-11).
 - Check operation of instrument panel components (TM 9-2320-280-10).

4-13. ELECTRICAL GAUGE REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP:

Tools

General mechanic's tool kit:
automotive (Appendix B, Item 1)

Manual References

TM 9-2320-280-10
TM 9-2320-280-24P

Materials/Parts

Two lockwashers (Appendix G, Item 169)

Equipment Condition

Battery ground cable disconnected (para. 4-73).

NOTE

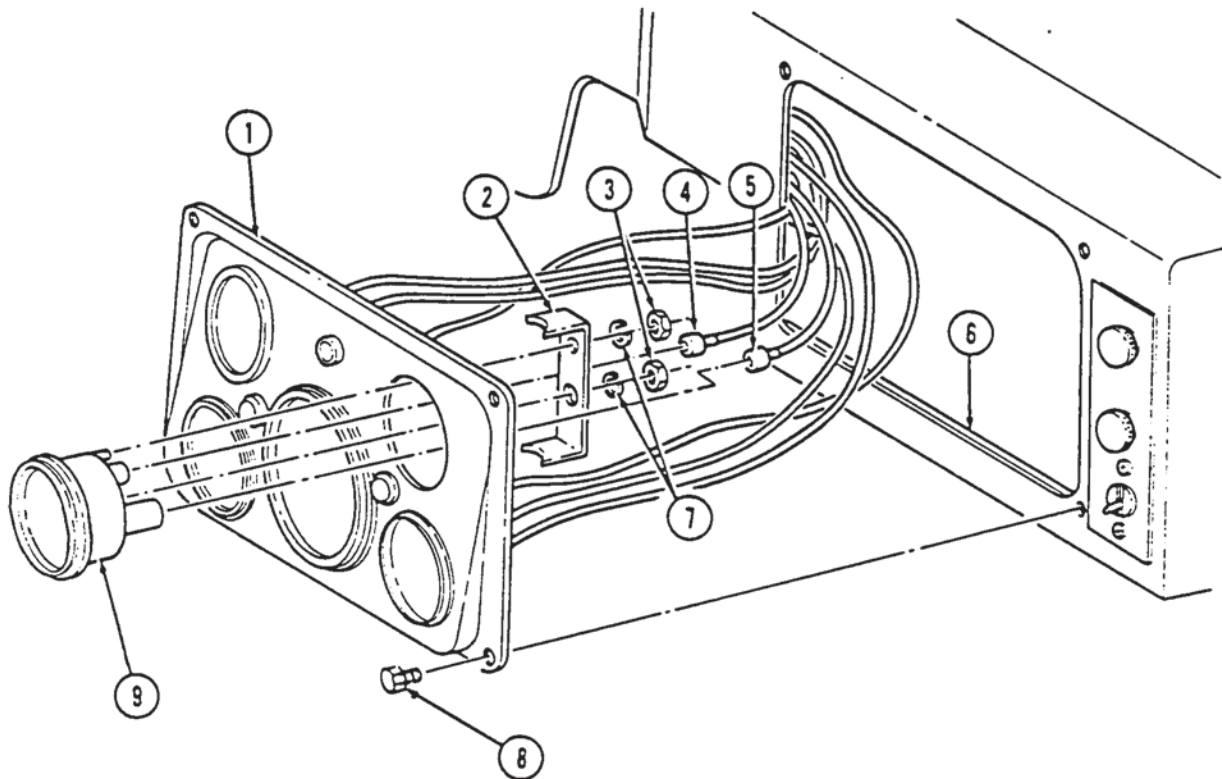
- All electrical gauges are removed and installed basically the same. This procedure covers the temperature gauge.
- Prior to removal, tag all leads for installation.

a. Removal

1. Remove four capscrews (8) from instrument cluster (1) and instrument panel (6).
2. Pull instrument cluster (1) away from panel (6).
3. Disconnect leads (4) and (5) from gauge (9).
4. Remove two nuts (3), lockwashers (7), gauge retaining bracket (2), and gauge (9) from instrument cluster (1). Discard lockwashers (7).

b. Installation

1. Install gauge (9) and retaining bracket (2) on instrument cluster (1) with two new lockwashers (7) and nuts (3). Tighten nuts (3) to 8 lb-in. (1 N•m).
2. Connect leads (4) and (5) to gauge (9).
3. Install instrument cluster (1) to panel (6) with four capscrews (8).

4-13. ELECTRICAL GAUGE REPLACEMENT (Cont'd)

- FOLLOW-ON TASKS:
- Connect battery ground cable (para. 4-73).
 - Start engine and check operation of gauge (TM 9-2320-280-10).

4-13.1. TACHOMETER REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP:

Applicable Models

M1123

Tools

General mechanic's tool kit:
automotive (Appendix B, Item 1)

Material/Parts

Gasket (Appendix G, Item 55)
Seven lockwashers (Appendix G, Item 156)
Lockwasher (Appendix G, Item 155)
Two locknuts (Appendix G, Item 72)
Seal (Appendix G, Item 285)
Two lockwashers (Appendix G, Item 138)
Lockwasher (Appendix G, Item 168)

Manual References

TM 9-2320-280-24P

Equipment Condition

- Battery ground cable disconnected (para. 4-73).
- Radio rack removed (para. 12-132).
- Radio rack mounting brackets removed (para. 12-130).
- Engine access cover removed (para. 10-15).

a. Removal

1. Remove engine harness connector (2) from tachometer connector (1).
2. Remove seven screws (4), lockwashers (3), washers (25), cover (5), and gasket (24) from tach/hourmeter box (18). Discard lockwashers (3) and gasket (24).
3. Remove nut (33), lockwasher (34), ground cable (32), and washer (35) from stud (27). Discard lockwasher (34).
4. Remove locknut (36), washer (31), and safety lanyard (30) from stud (28). Discard locknut (36).
5. Remove locknut (37), washer (38), and washer (39) from stud (26) and remove tach/hourmeter box (18) from engine access cover (29). Discard locknut (37).
6. Remove seal (40) from tach/hourmeter box (18). Discard seal (40).
7. Remove nut (15), washer (14), washer (6), and screw (7) from tach/hourmeter box (18).
8. Remove two nuts (21), lockwashers (22), and bracket (19) from tach/hourmeter box (18). Discard lockwashers (22).
9. Remove nuts (13) and (17) from cable connectors (8) and (23).
10. Remove nut (10), lockwasher (11), washer (12), toggle switch (9), cable connectors (8) and (23), and tachometer (16) from tach/hourmeter box (18) Discard lockwasher (11).

b. Installation

1. Install cable connectors (8) and (23) to tach/hourmeter box (18) with nuts (13) and (17).
2. Install toggle switch (9) in tach/hourmeter box (18) with washer (12), lockwasher (11), and nut (10).
3. Install tachometer (16) to tach/hourmeter box (18) with bracket (19), two lockwashers (22), and nuts (21).
4. Install screw (7), washer (6), washer (14), and nut (15) on tach/hourmeter box (18).
5. Install seal (40) on tach/hourmeter box (18).
6. Install tach/hourmeter box (18) on engine access cover (29) with washer (39), washer (38), and locknut (37).
7. Install safety lanyard (30) to stud (28) with washer (31) and locknut (36).