

INERTIAL AIR SEPARATOR - MAINTENANCE PRACTICES

1. General

- A. Inertial air separator maintenance practices consist of separator control linkage removal/installation and separator control rigging.

2. Inertial Air Separator Control Linkage Removal/Installation

- A. Remove Inertial Air Separator Control Linkage (Refer to Figure 201).
- (1) Open upper cowling doors and remove lower cowling panels.
 - (2) In engine compartment, disconnect actuating handle tube rod end (47) from lever arm (59).
 - (3) Remove actuating handle tube rod end (47) from swivel (49).
 - (4) In cabin, remove setscrew (55) from bezel (52), loosen clamp (66), and withdraw actuating handle tube (56) from instrument panel.
 - (5) In engine compartment, disconnect actuating tube forward rod end (30) from actuating link (31).
 - (6) Remove pivot bolt (41), actuating tube (42) and lever arm (59).
 - (7) Remove bolt (20) and (33) from forward vane bellcrank (16) and aft vane bellcrank (34). Remove forward vane push-pull rod (21).
- B. Install Inertial Air Separator Control Linkage (Refer to Figure 201).
- (1) If removed, install inertial separator assembly.
 - (2) Install bushings (62) in each end of lever arm (59), insert spacer (63) through bushings.
 - (3) Align pivot holes in lever arm (59) with holes in mounting brackets and install pivot bolt (41). Secure with washer (18) and nut (64).
 - (4) Connect actuating tube forward rod end (30) of actuating tube (42) to actuating link (31).
 - (5) In cabin, insert actuating handle tube (56) through bezel (52), clamp (66), vapor shield (65), and bushing (57) into engine compartment. Tighten setscrew (55).
 - (6) In engine compartment, install actuating handle tube rod end (47) on swivel (49) and connect to lever arm (59).
 - (7) Install forward vane push-pull rod (21) to forward vane bellcrank (16) and to aft vane bellcrank (34).
 - (8) Rig inertial air separator control linkage.
 - (9) Install cowling panel sections and close upper cowl doors.

3. Inertial Air Separator Control Linkage Rigging

- A. Rig Inertial Separator Control Linkage (Refer to Figure 201).
- (1) With aft vane (12) in NORMAL (closed) position and actuating handle tube (56) and actuating handle (53) fully forward and locked (handle vertical), install actuating handle tube rod end (47) at top of lever arm (59). Leave nut (44) loose.
 - (2) Install actuating tube forward rod end (30) and actuating tube aft rod end (43) on actuating tube (42) and install tube between lever arm (59) and actuating link (31). Leave nut (46) loose.
 - (3) Rotate eccentric bushing (24) so that actuating link (31) bottoms against slot in stop link (22) before going beyond centerline of the two links.
 - (4) Bend tabs on lock washer (23) to prevent rotation of eccentric bushing (24).
 - (5) Holding forward vane (13) in fully open position against stop block, attach forward vane push-pull rod (21) between forward vane bellcrank (16) and aft vane bellcrank (34). Ensure clevis (19) attaches to forward vane bellcrank (16) and aft rod end (36) aligns with inside lever arm hole in aft vane bellcrank.
 - (6) In cabin, pull out actuating tube handle to BYPASS position and check that forward vane (13) seats firmly against airfoil assembly (7) inside inertial separator. If forward vane (13) does not contact airfoil (7), disconnect clevis (19) from eyebolt in forward vane bellcrank (16) and screw in eyebolt to shorten bellcrank arm. Recheck for vane-to-airfoil contact.
 - (7) Conversely, if forward vane (13) contacts airfoil (7) in separator before aft vane (12) opens fully against its stop (BYPASS position), screw eyebolt out of forward vane bellcrank (16) to lengthen its lever arm and recheck.
 - (8) Tighten all nuts on ends of adjustable push rods.

Figure 201 : Sheet 1 : Inertial Separator and Control Linkage

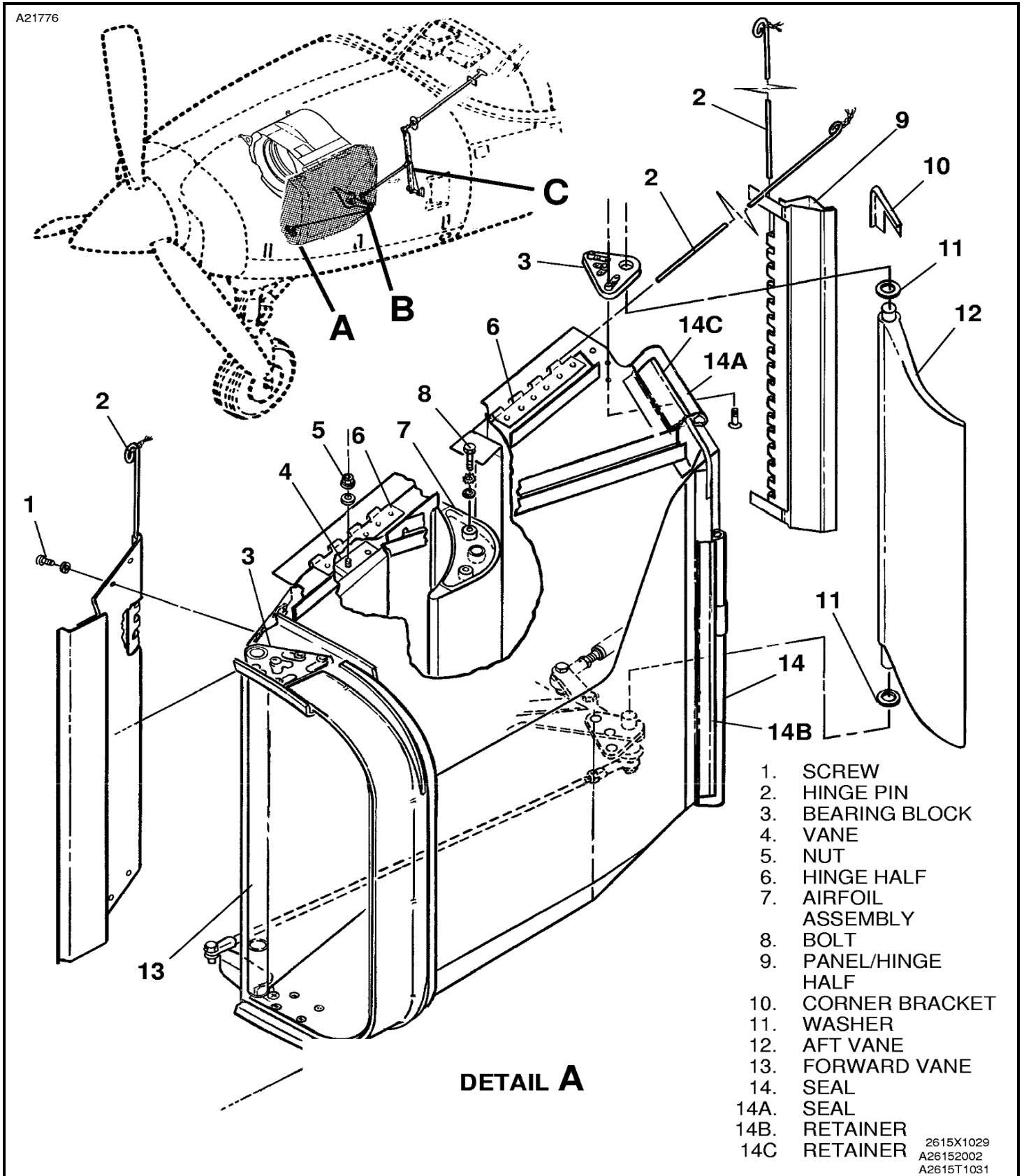


Figure 201 : Sheet 2 : Inertial Separator and Control Linkage

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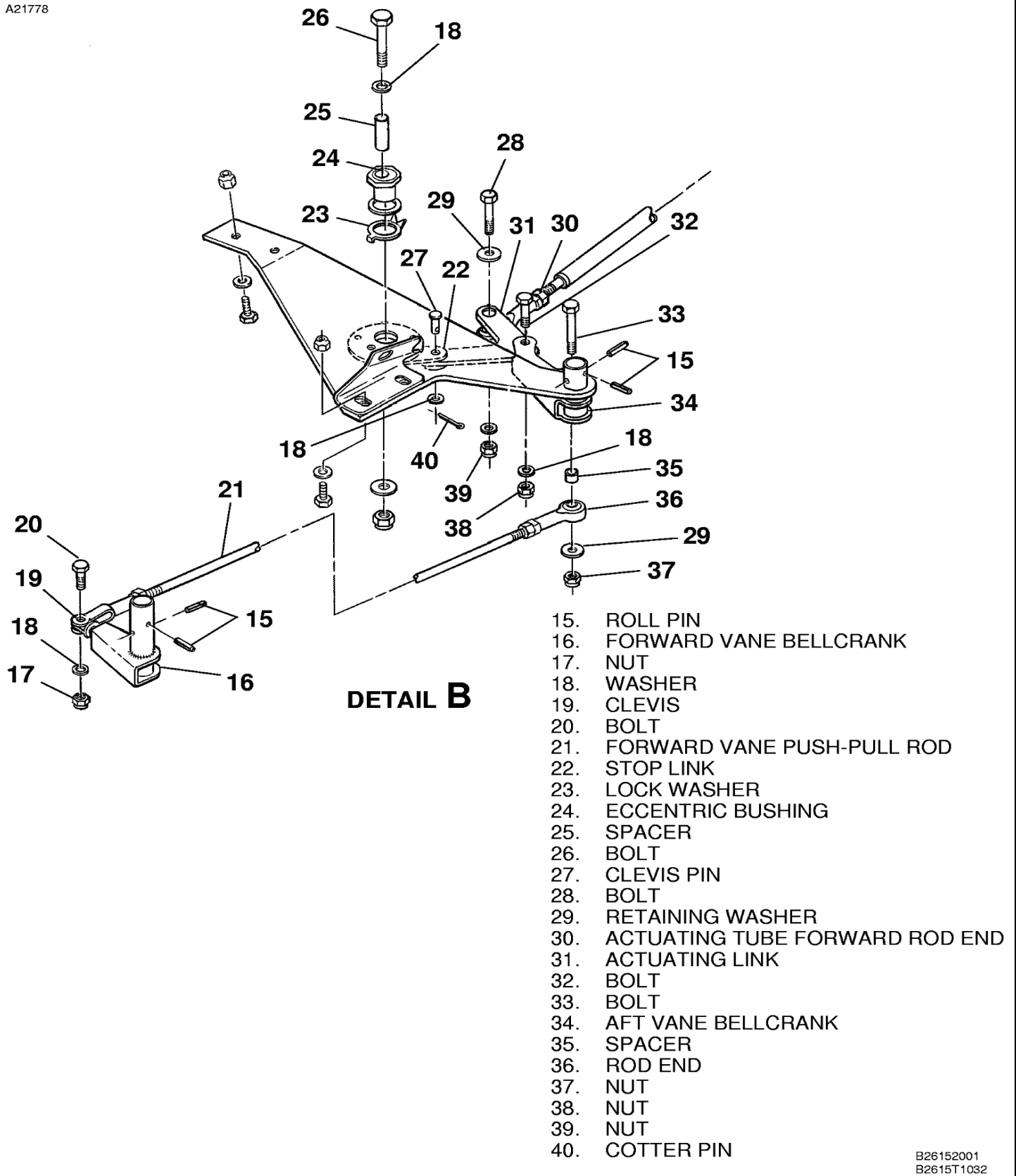
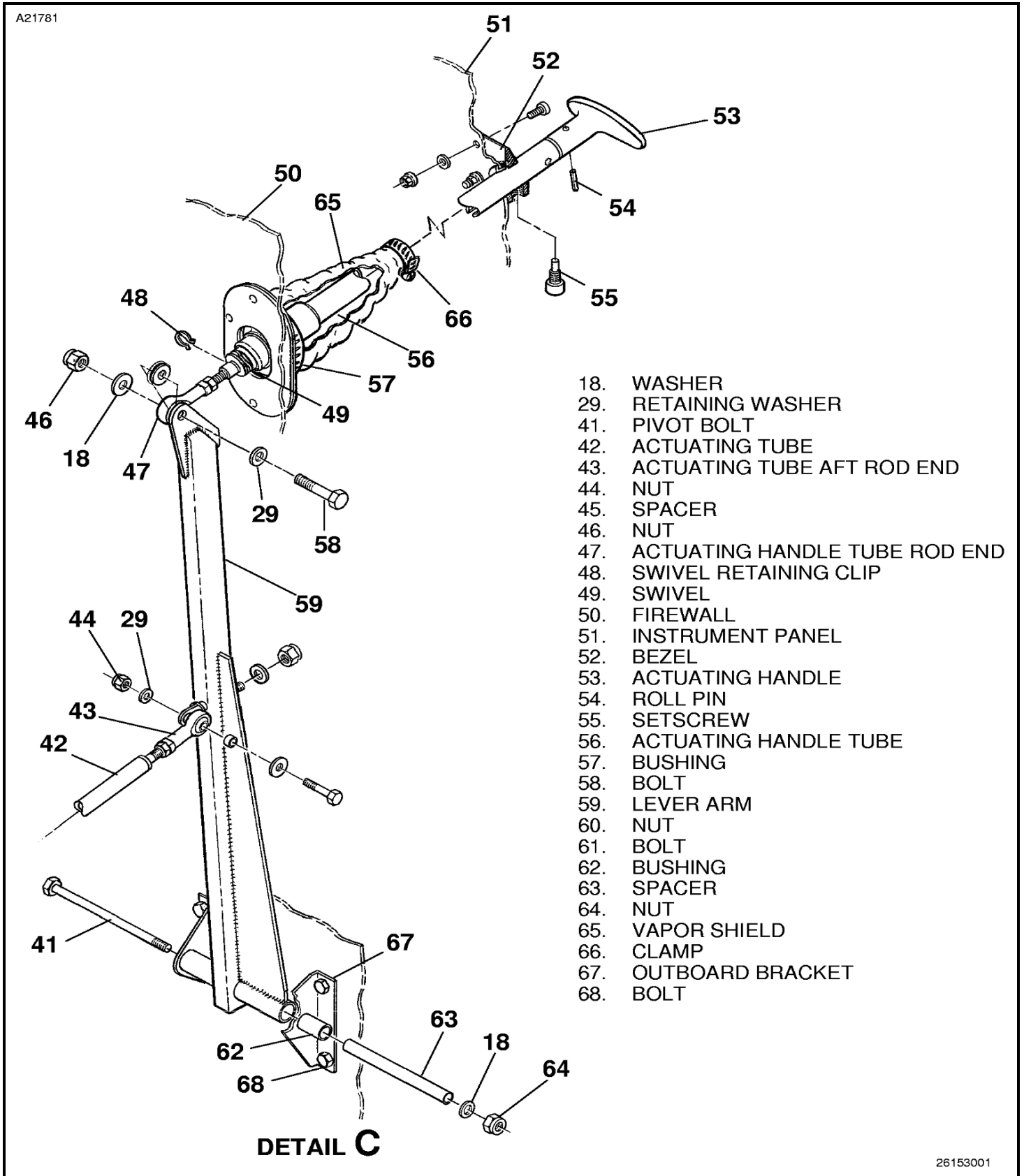


Figure 201 : Sheet 3 : Inertial Separator and Control Linkage



- 18. WASHER
- 29. RETAINING WASHER
- 41. PIVOT BOLT
- 42. ACTUATING TUBE
- 43. ACTUATING TUBE AFT ROD END
- 44. NUT
- 45. SPACER
- 46. NUT
- 47. ACTUATING HANDLE TUBE ROD END
- 48. SWIVEL RETAINING CLIP
- 49. SWIVEL
- 50. FIREWALL
- 51. INSTRUMENT PANEL
- 52. BEZEL
- 53. ACTUATING HANDLE
- 54. ROLL PIN
- 55. SETSCREW
- 56. ACTUATING HANDLE TUBE
- 57. BUSHING
- 58. BOLT
- 59. LEVER ARM
- 60. NUT
- 61. BOLT
- 62. BUSHING
- 63. SPACER
- 64. NUT
- 65. VAPOR SHIELD
- 66. CLAMP
- 67. OUTBOARD BRACKET
- 68. BOLT

DETAIL C

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