



Figure 3-38. Sub Drive Assembly

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| 1. PLUG | 29. LOCKWASHER | 57. PIN |
| 2. CAPSCREW | 30. FLYWHEEL | 58. NUT |
| 3. LOCKWASHER | 31. BEARING | 59. FLANGE |
| 4. PLATE | 32. PIN | 60. KEY |
| 5. CAPSCREW | 33. NUT | 61. CAPSCREW |
| 6. LOCKWASHER | 34. WASHER | 62. LOCKWASHER |
| 7. COVER | 35. FLANGE | 63. PLATE |
| 8. CAP | 36. KEY | 64. GASKET |
| 9. CAPSCREW | 37. CAPSCREW | 65. BEARING |
| 10. LOCKWASHER | 38. LOCKWASHER | 66. SEAL |
| 11. PLATE | 39. PLATE | 67. SPACER |
| 12. GASKET | 40. GASKET | 68. CAPSCREW |
| 13. SEAL | 41. BEARING | 69. LOCKWASHER |
| 14. CHAIN | 42. SEAL | 70. PLATE |
| 15. BEARING | 43. CAPSCREW | 71. GASKET |
| 16. SPROCKET | 44. LOCKWASHER | 72. SPROCKET |
| 17. KEY | 45. RETAINER | 73. SPROCKET |
| 18. PIN | 46. GASKET | 74. SEAL |
| 19. NUT | 47. SPACER | 75. BEARING |
| 20. FLANGE | 48. CHAIN | 76. SPACER |
| 21. KEY | 49. SPROCKET | 77. KEY |
| 22. CAPSCREW | 50. SPACER | 78. SHAFT |
| 23. LOCKWASHER | 51. ADAPTER | 79. CASE |
| 24. PLATE | 52. GASKET | |
| 25. GASKET | 53. BEARING | |
| 26. BEARING | 54. SEAL | |
| 27. SHAFT | 55. KEY | |
| 28. CAPSCREW | 56. SHAFT | |

Legend for 3-38. Sub Drive Assembly

3.32 SUB DRIVE ASSEMBLY

The sub-drive case is located immediately behind the mud pump and is used to transmit power, through chains and sprockets, from the power take-off to the mud pump drive, rotary table, drawworks, small air compressor and oil pump.

The sub-drive case is made up of three (3) shafts, ball bearing mounted throughout, using the oil bath splash lubrication. It is fully enclosed in a strong oil-tight case which may be removed as a unit to be repaired.

DISASSEMBLY: First, remove the mud pump drive, disconnect all universal joints at flanges from the case, disconnect the transmission shifter rod from the transmission and remove the clutch release cable from the 14480 clutch lever. After the eight (8) bolts and nuts are removed, that hold the case to the frame, the sub drive case clutch and transmission may be removed as a unit. Remove the transmission and clutch as described under transmission and clutch. The flywheel may be removed by removing the five (5) capscrews which hold it to the center shaft. After the inspection plate is removed, remove the capscrews which hold the bearing retainers.

NOTE: On the sub-drive case there is no adjustment of chain length.

After the chain is slacked off, remove the master link and remove chain from the case. Loosen bearing retainer plates from the case and the shaft bearing and sprockets may be removed from the case and disassembled, by the use of a press as all sprockets and bearings are a press fit to the shafts.

INSPECTION: After the case and shafts have been disassembled, wash out the case and all parts with a cleaning solvent and examine parts for wear. Particular care should be taken to clean all bearings and check for wear.

ASSEMBLY: Assemble in reverse of disassembly, replacing all worn parts. Always install new grease seals when reassembling.

SUB DRIVE ASSEMBLY (CONT'D)

ADJUSTMENTS: The shafts should have $1/32''$ end play between bearings. This is obtained by adding gaskets between the case and bearing retainers.

LUBRICATION: See Lubrication Chart for grade of lubrication and capacity.