

PARTS & SERVICE NEWS

REF NO. AA00025

DATE January 25, 2000

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SUBJECT: PREVENTION OF ABNORMAL NOISE OF TRANSMISSION CONTROL VALVE

PURPOSE: Reduction of abnormal noise from transmission valve.

APPLICATION: WA120-3L Wheel Loader Serial Number A30034 THRU A30222
WA180-3L Wheel Loader Serial Number A80213 THRU A80432
WA180-3PTC Wheel Loader Serial Number A85050 THRU A85227

FAILURE CODE: 159099

DESCRIPTION: Variations in pressure between the transmission control valve and the main regulator valve may generate hydraulic pulses. The pulses cause vibration in the brake booster, which is in the same hydraulic circuit and attached under the lower part of the cab floor. The result is an abnormal noise heard in the cab. To remedy this, the main regulator valve has been redesigned and is available in a transmission with a new part number.

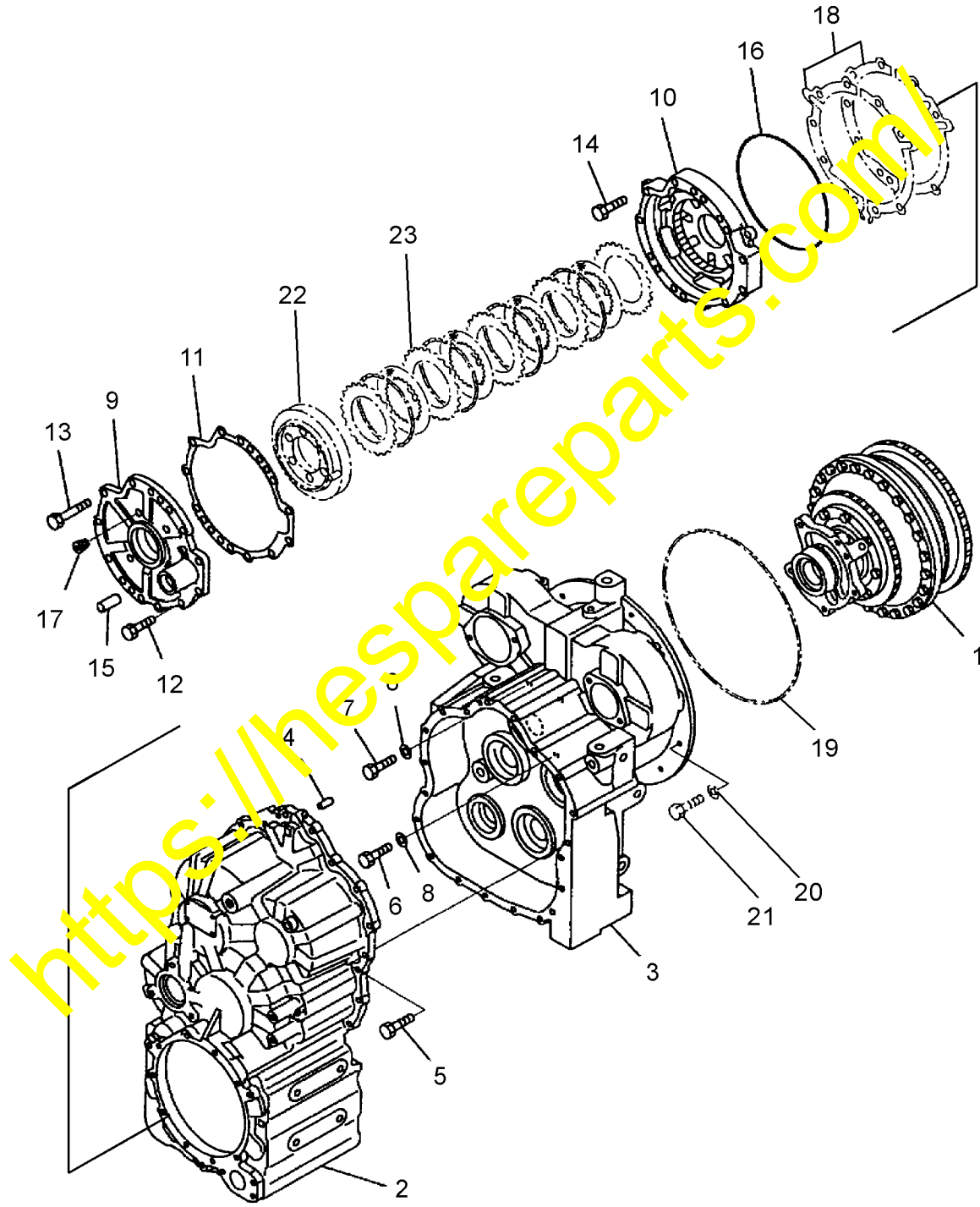
PARTS LIST

| New Part Number | Description | Old Part Number |
|-----------------|--------------|-----------------|
| 714-11-10042 | Transmission | 714-11-X0040 |

INSTRUCTIONS

- Using the appropriate WA180-3L or WA180-3PTC Shop Manual, replace the transmission.

F4350-51A0
TRANSMSSION
TRANSMISSION CASE



VLPB1637

F4350-51A0

TRANSMISSION

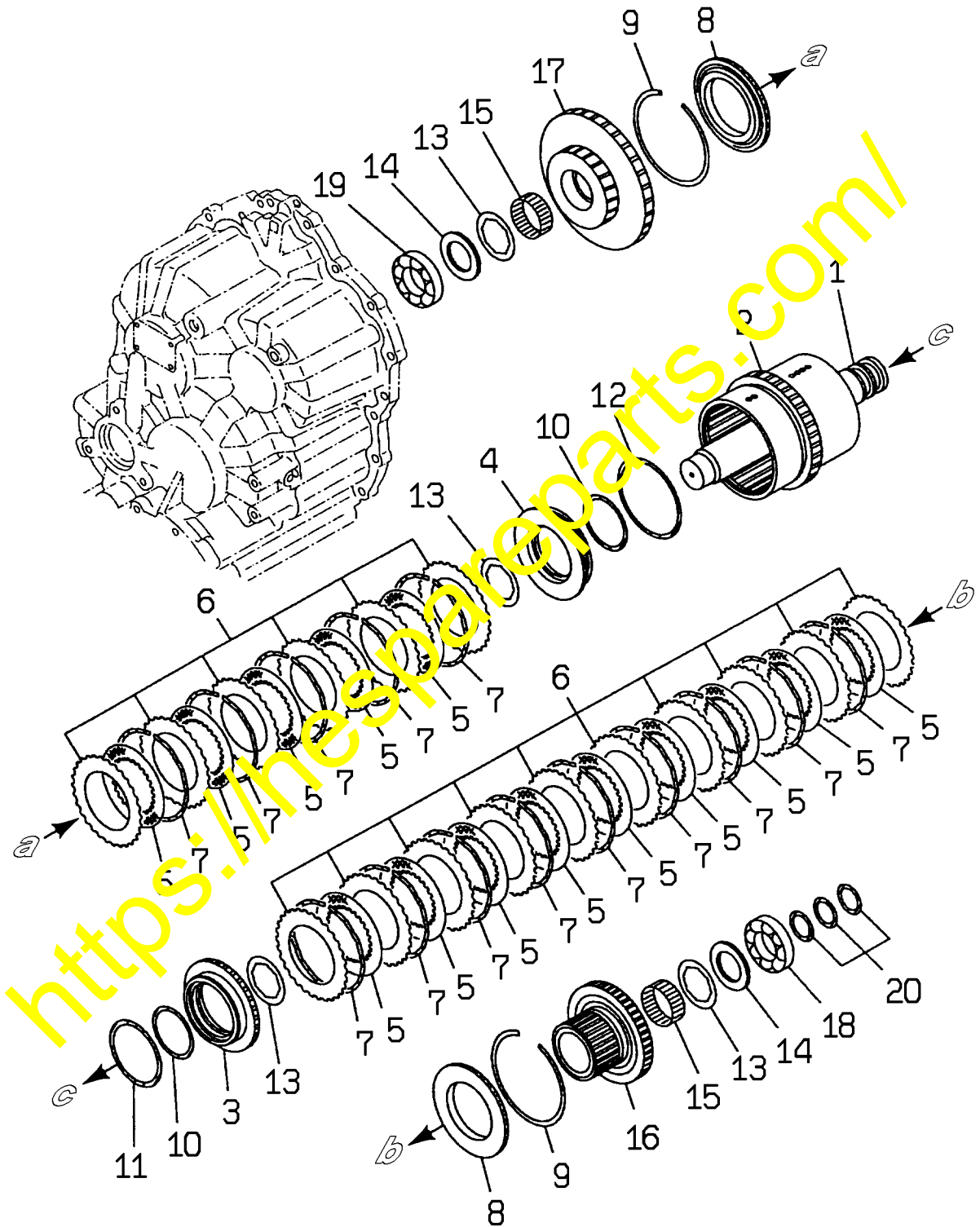
TRANSMISSION CASE

| Item | Part Number | Description | Qty. | Ref. | Serial No. |
|------|--------------|---|------|------|------------|
| | 714-11-10042 | TRANSMISSION ASSEMBLY | 1 | | A80136- |
| 1 | | . TORQUE CONVERTER ASSEMBLY (SEE FIG. F4350-67A0) | 1 | | A80136- |
| 2 | 714-11-11211 | . CASE, FRONT | 1 | | A80136- |
| 3 | 714-11-11121 | . CASE, TORQUE CONVERTER | 1 | | A80136- |
| 4 | 04020-01228 | . PIN, DOWEL | 2 | | A80136- |
| 5 | 01010-61240 | . BOLT | 20 | | A80136- |
| 6 | 01010-31280 | . BOLT | 3 | | A80136- |
| 7 | 01010-31235 | . BOLT | 2 | | A80136- |
| 8 | 01643-31232 | . WASHER | 5 | | A80136- |
| 9 | 714-11-18311 | . HOUSING | 1 | | A80136- |
| 10 | 714-11-18321 | . RETAINER | 1 | | A80136- |
| 11 | 714-11-18691 | . GASKET | 1 | | A80136- |
| 12 | 01010-31235 | . BOLT | 3 | | A80136- |
| 13 | 01010-31275 | . BOLT | 9 | | A80136- |
| 14 | 01010-31235 | . BOLT | 2 | | A80136- |
| 15 | 04020-01228 | . PIN, DOWEL | 2 | | A80136- |
| 16 | 07000-15260 | . O-RING | 1 | | A80136- |
| 17 | 07043-70211 | . PLUG | 3 | | A80136- |
| 18 | | . SHIM (SEE FIG. F4350-56A0) | 3 | | A80136- |
| 19 | | . O-RING (SEE FIG. F4300-01A0) | 1 | | A80136- |
| 20 | | . WASHER (SEE FIG. F4300-01A0) | 12 | | A80136- |
| 21 | | . BOLT (SEE FIG. F4300-01A0) | 12 | | A80136- |
| 22 | | . PISTON (SEE FIG. F4350-57A0) | 1 | | A80136- |
| 23 | | . PLATE (SEE FIG. F4350-57A0) | 5 | | A80136- |

F4350-53A0

TRANSMSSION

FORWARD AND 2ND CLUTCH



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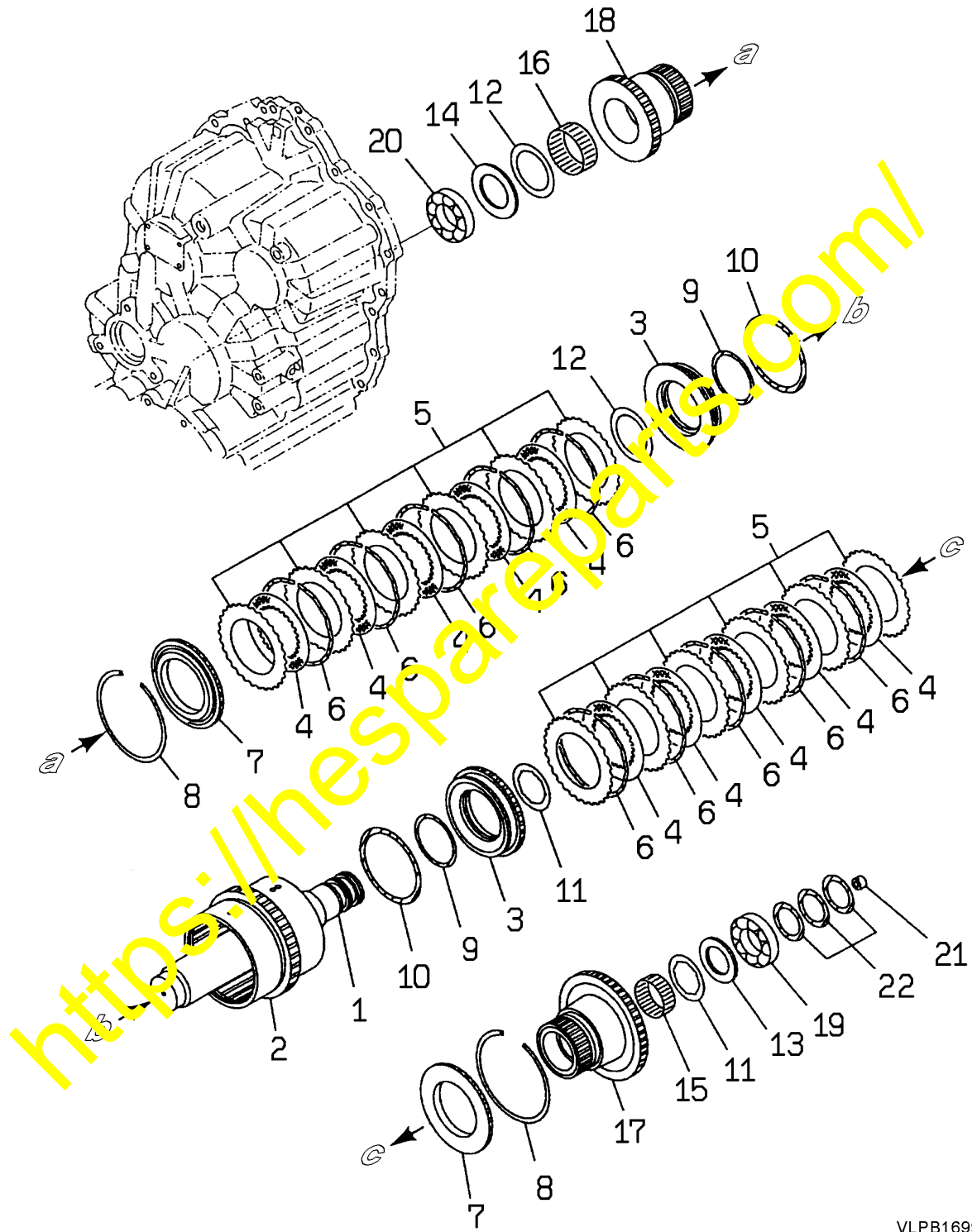
F4350-53A0

TRANSMISSION

FORWARD AND 2ND CLUTCH

| Item | Part Number | Description | Qty. | Ref. | Serial No. |
|------|--------------|--------------------------------------|------|------|------------|
| | | TRANSMISSION (SEE FIG. F4350-51A0) . | 1 | | A80136- |
| | 714-11-12020 | .CLUTCH ASSEMBLY, FORWARD AND 2ND . | 1 | | A80136- |
| | 714-11-12141 | ..SHAFT ASSEMBLY | 1 | | A80136- |
| 1 | NSS | ...SHAFT | 1 | | A80136- |
| 2 | NSS | ...HOUSING | 1 | | A80136- |
| 3 | 714-11-12650 | ..PISTON, FORWARD | 1 | | A80136- |
| 4 | 714-11-12660 | ..PISTON, 2ND | 1 | | A80136- |
| 5 | 714-08-19710 | ..DISC, FRICTION | 14 | | A80136- |
| 6 | 714-08-19730 | ..PLATE, SEPARATOR | 16 | | A80136- |
| 7 | 714-08-12910 | ..SPRING, WAVE | 14 | | A80136- |
| 8 | 714-08-12610 | ..PLATE, END | 2 | | A80136- |
| 9 | 714-08-19510 | ..RING, SNAP | 2 | | A80136- |
| 10 | 714-08-19210 | ..RING, SEAL | 2 | | A80136- |
| 11 | 714-11-19240 | ..RING, SEAL | 1 | | A80136- |
| 12 | 714-11-19230 | ..RING, SEAL | 1 | | A80136- |
| 13 | 714-11-19510 | ..WASHER, THRUST | 4 | | A80136- |
| 14 | 714-11-12710 | ..SPACE | 2 | | A80136- |
| 15 | 419-15-12271 | ..BEARING, NEEDLE | 3 | | A80136- |
| 16 | 714-11-12430 | ..GEAR, FORWARD | 1 | | A80136- |
| 17 | 714-11-12440 | ..GEAR, 2ND | 1 | | A80136- |
| 18 | 06040-06210 | ..BEARING | 1 | | A80136- |
| 19 | 06040-06310 | ..BEARING | 1 | | A80136- |
| 20 | 419-15-12122 | ..RING, SEAL | 3 | | A80136- |

F4350-54A0
TRANSMSSION
3RD AND 4TH CLUTCH



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F4350-54A0

TRANSMISSION

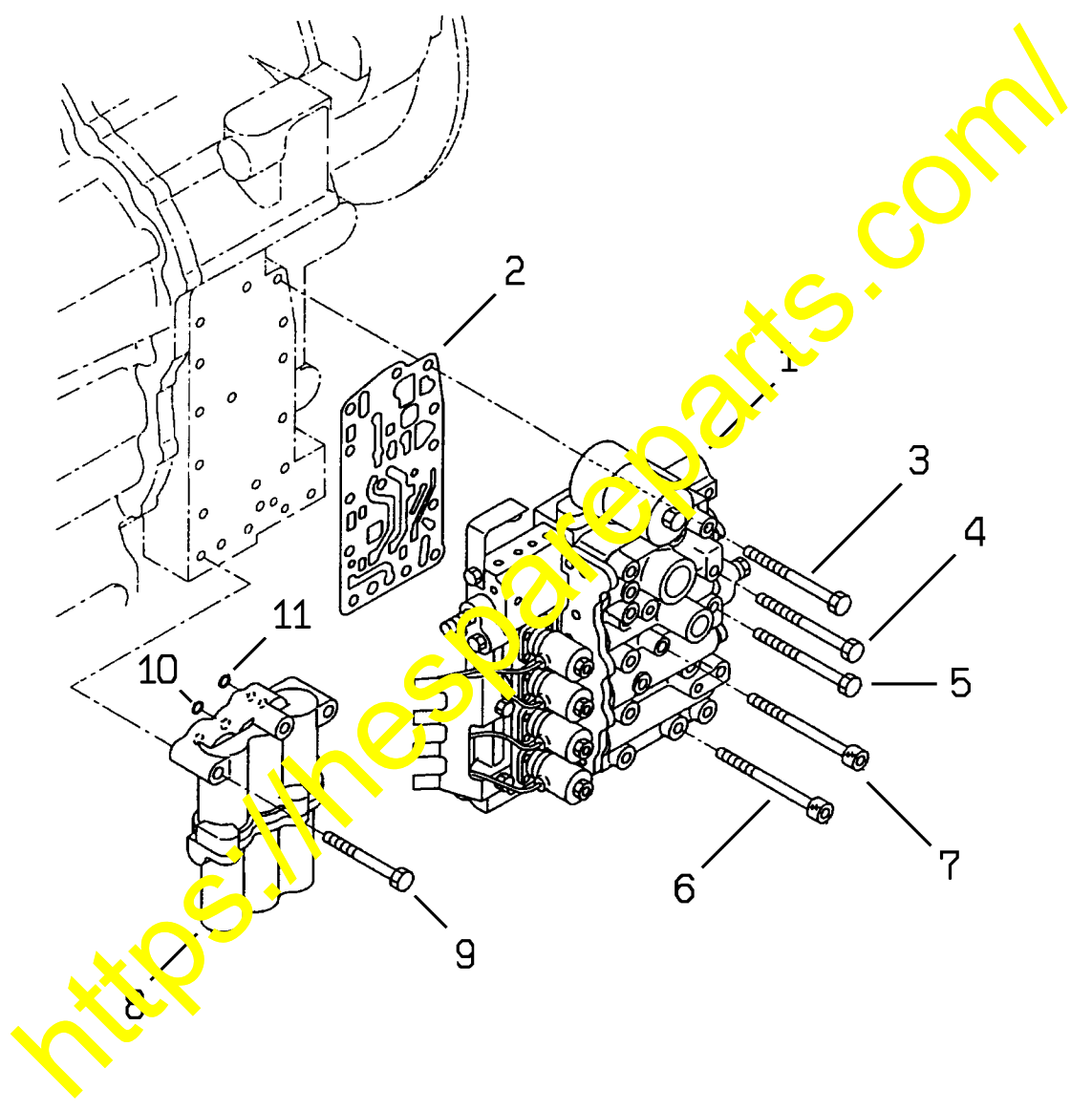
3RD AND 4TH CLUTCH

| Item | Part Number | Description | Qty. | Ref. | Serial No. |
|------|--------------|--|------|------|------------|
| | | TRANSMISSION (SEE FIG. F4350-51A0) . | 1 | | A80136- |
| | 714-11-12030 | . CLUTCH ASSEMBLY, 3RD AND 4TH | 1 | | A80136- |
| | 714-11-12170 | .. SHAFT ASSEMBLY | 1 | | A80136- |
| 1 | | ... SHAFT | 1 | | A80136- |
| 2 | | ... HOUSING | 1 | | A80136- |
| 3 | 714-11-12660 | .. PISTON, 3RD AND 4TH | 2 | | A80136- |
| 4 | 714-08-19710 | .. DISC, FRICTION | 10 | | A80136- |
| 5 | 714-08-19730 | .. PLATE, SEPARATOR | 10 | | A80136- |
| 6 | 714-08-12910 | .. SPRING, WAVE | 10 | | A80136- |
| 7 | 714-08-12610 | .. PLATE, END | 2 | | A80136- |
| 8 | 714-08-19510 | .. RING, SNAP | 2 | | A80136- |
| 9 | 714-08-19210 | .. RING, SEAL | 2 | | A80136- |
| 10 | 714-11-19230 | .. RING, SEAL | 2 | | A80136- |
| 11 | 714-11-19510 | .. WASHER, THRUST | 2 | | A80136- |
| 12 | 714-08-19570 | .. WASHER, THRUST | 2 | | A80136- |
| 13 | 714-11-12710 | .. SPACER | 1 | | A80136- |
| 14 | 714-11-12720 | .. SPACER | 1 | | A80136- |
| 15 | 419-15-12271 | .. BEARING, NEEDLE | 1 | | A80136- |
| 16 | 714-23-19430 | .. BEARING, NEEDLE | 2 | | A80136- |
| 17 | 714-11-12460 | .. GEAR, 4TH | 1 | | A80136- |
| 18 | 714-11-12470 | .. GEAR, 3RD | 1 | | A80136- |
| 19 | 06040-06219 | .. BEARING | 1 | | A80136- |
| 20 | 06040-06312 | .. BEARING | 1 | | A80136- |
| 21 | 714-11-12850 | .. SCREW | 1 | | A80136- |
| 22 | 419-15-12122 | .. RING, SEAL | 3 | | A80136- |

F4350-59A0

TRANSMISSION CONTROL VALVE

MOUNTING



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F4350-59A0

TRANSMISSION CONTROL VALVE

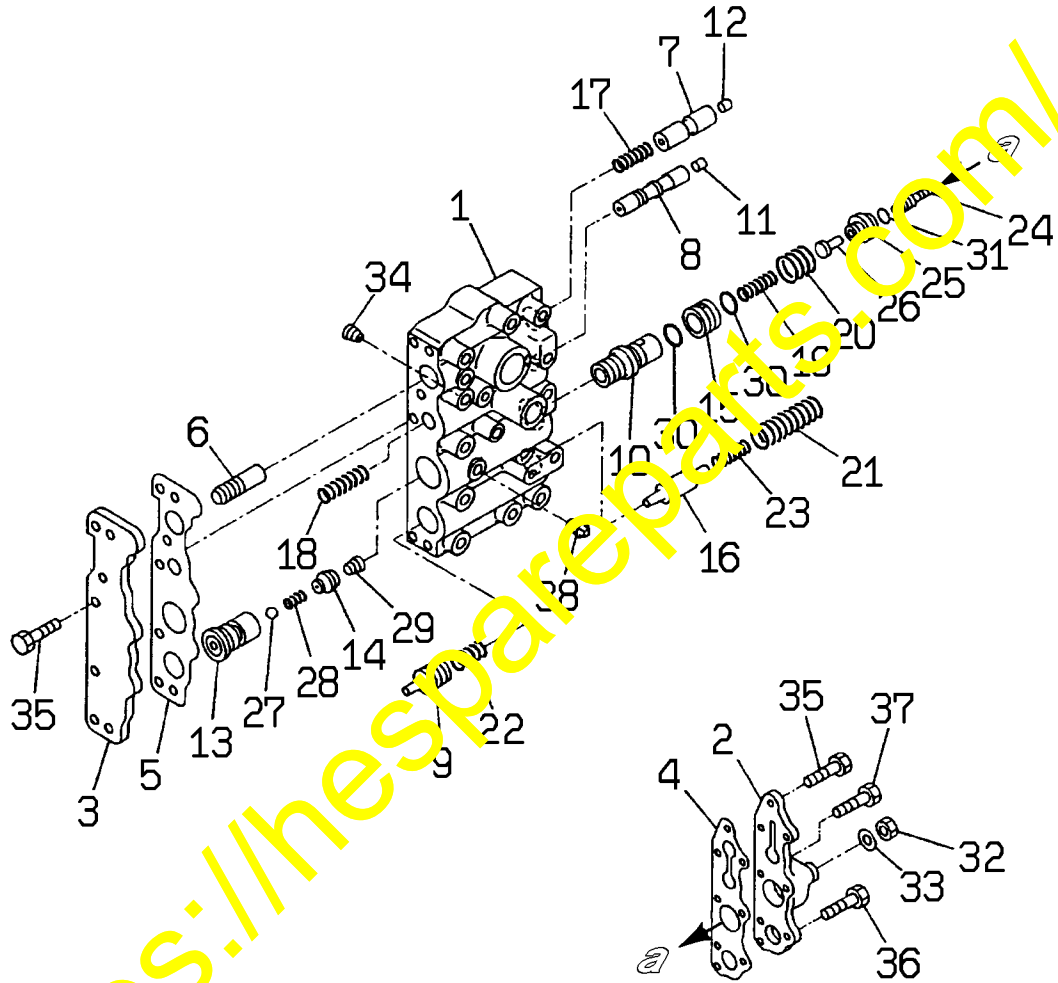
MOUNTING

| Item | Part Number | Description | Qty. | Ref. | Serial No. |
|------|--------------|---|------|------|------------|
| | | TRANSMISSION ASSEMBLY (SEE FIG. F4350-51A0) | 1 | | A80136- |
| 1 | 714-11-15031 | . CONTROL VALVE ASSEMBLY | 1 | | A80136- |
| 2 | 714-11-16920 | . GASKET, LOWER | 1 | | A80136- |
| 3 | 01011-81020 | . BOLT | 4 | | A80136- |
| 4 | 01011-81030 | . BOLT | 2 | | A80136- |
| 5 | 01011-81035 | . BOLT | 2 | | A80136- |
| 6 | 419-15-16680 | . BOLT | 2 | | A80136- |
| 7 | 419-15-15170 | . BOLT | 1 | | A80136- |
| 8 | | . VALVE ASSEMBLY, ACCUMULATOR (SEE FIG. F4350-63A0) | 1 | | A80136- |
| 9 | 01010-81070 | . BOLT | 2 | | A80136- |
| 10 | 07000-73025 | . O-RING | 2 | | A80136- |
| 11 | 07000-72014 | . O-RING | 2 | | A80136- |

F4350-60A0

TRANSMISSION CONTROL VALVE

UPPER VALVE



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F4350-60A0

TRANSMISSION CONTROL VALVE

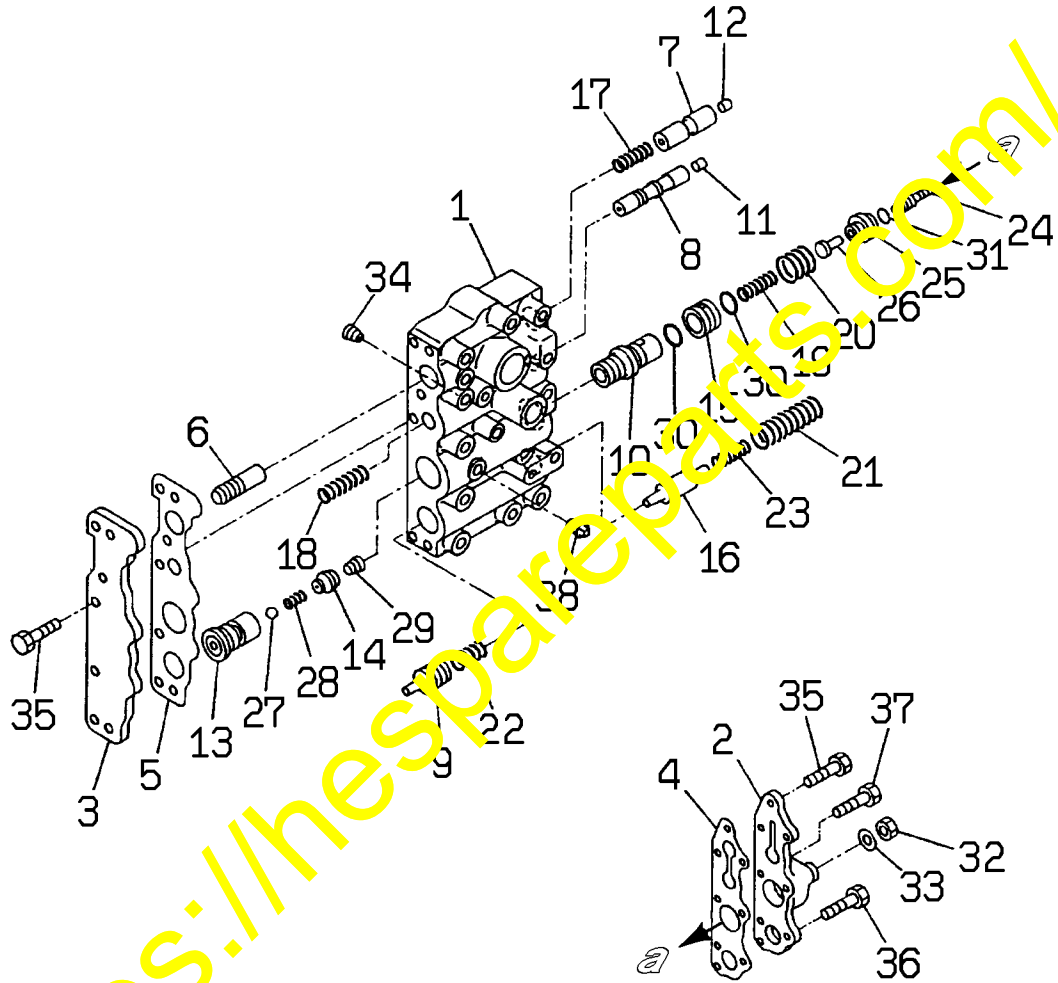
UPPER VALVE

| Item | Part Number | Description | Qty. | Ref. | Serial No. |
|------|--------------|---|------|------|------------|
| | | TRANSMISSION ASSEMBLY (SEE FIG. F4350-51A0) | 1 | | A80136- |
| | | . CONTROL VALVE ASSEMBLY (SEE FIG. F4350-59A0) | 1 | | A80136- |
| | 714-11-15100 | .. VALVE ASSEMBLY, UPPER | 1 | | A80136- |
| 1 | 419-15-15711 | ... BODY, UPPER | 1 | | A80136- |
| 2 | 419-15-15720 | ... COVER | 1 | | A80136- |
| 3 | 419-15-15730 | ... COVER | 1 | | A80136- |
| 4 | 419-15-15741 | ... GASKET | 1 | | A80136- |
| 5 | 419-15-15751 | ... GASKET | 1 | | A80136- |
| 6 | 419-15-15760 | ... VALVE, PILOT | 1 | | A80136- |
| 7 | 714-11-15390 | ... VALVE, MAIN | 1 | | A80136- |
| 8 | 714-16-25360 | ... VALVE, PRIORITY | 1 | | A80136- |
| 9 | 419-15-15790 | ... VALVE, ACCUMULATOR | 1 | | A80136- |
| 10 | 419-15-15810 | ... VALVE, MODULATE | 1 | | A80136- |
| 11 | 714-11-15350 | ... PISTON, LOAD | 1 | | A80136- |
| 12 | 714-11-15330 | ... PISTON, LOAD | 1 | | A80136- |
| 13 | 419-15-15840 | ... VALVE, QUICK RETURN | 1 | | A80136- |
| 14 | 419-15-15850 | ... PLUG, VALVE | 1 | | A80136- |
| 15 | 419-15-15860 | ... SLEEVE, MODULATE | 1 | | A80136- |
| 16 | 419-15-15870 | ... SHAFT, ACCUMULATOR | 1 | | A80136- |
| 17 | 419-15-15910 | ... SPRING, MAIN | 1 | | A80136- |
| 18 | 419-15-15920 | ... SPRING, PRIORITY | 1 | | A80136- |
| 19 | 419-15-15940 | ... SPRING, INNER MODULATE | 1 | | A80136- |
| 20 | 419-15-15930 | ... SPRING, OUTER MODULATE | 1 | | A80136- |
| 21 | 419-15-15950 | ... SPRING, OUTER ACCUMULATOR | 1 | | A80136- |
| 22 | 419-15-15960 | ... SPRING, INNER ACCUMULATOR | 1 | | A80136- |
| 23 | 419-15-15970 | ... SPRING, INNER ACCUMULATOR | 1 | | A80136- |
| 24 | 419-15-15880 | ... ROD, ADJUST | 1 | | A80136- |

F4350-60A0

TRANSMSSION CONTROL VALVE

UPPER VALVE



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F4350-60A0

TRANSMISSION CONTROL VALVE

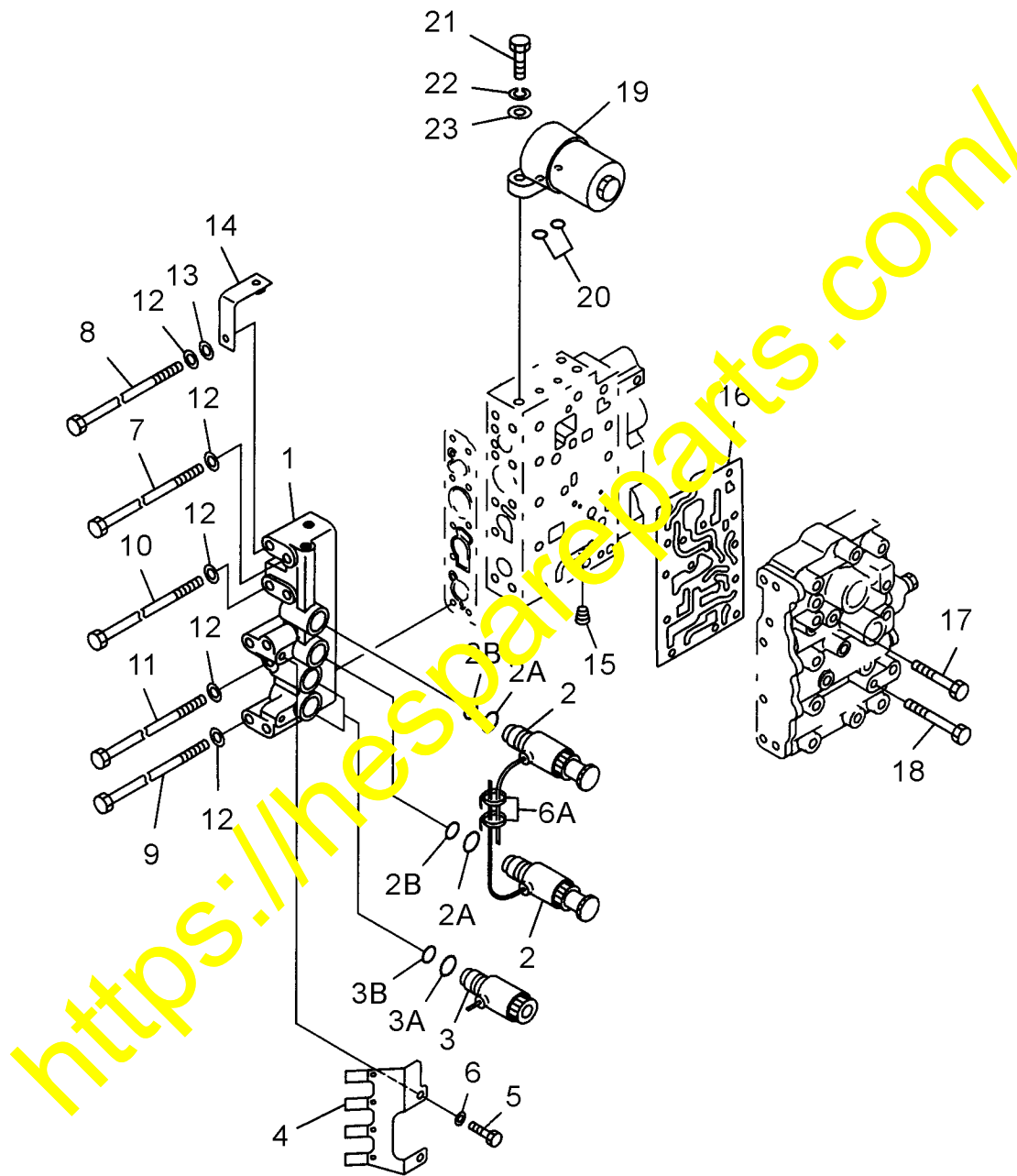
UPPER VALVE

| Item | Part Number | Description | Qty. | Ref. | Serial No. |
|------|--------------|----------------------------------|------|------|------------|
| 25 | 419-15-15890 | ... PLUG, MODULATE | 1 | | A80136- |
| 26 | 419-15-15980 | ... RETAINER, MODULATE | 1 | | A80136- |
| 27 | 04260-01270 | ... BALL | 1 | | A80136- |
| 28 | 419-15-15510 | ... SPRING, CHECK | 1 | | A80136- |
| 29 | 419-15-15640 | ... PLUG | 1 | | A80136- |
| 30 | 07000-03035 | ... O-RING | 2 | | A80136- |
| 31 | 07000-01009 | ... O-RING | 1 | | A80136- |
| 32 | 01580-11008 | ... NUT | 1 | | A80136- |
| 33 | 01643-31032 | ... WASHER | 1 | | A80136- |
| 34 | 417-15-15842 | ... ORIFICE, MAIN | 1 | | A80136- |
| 35 | 01010-31030 | ... BOLT | 12 | | A80136- |
| 36 | 01010-31040 | ... BOLT | 3 | | A80136- |
| 37 | 01010-31050 | ... BOLT | 2 | | A80136- |
| 38 | 07042-30108 | ... PLUG | 3 | | A80136- |

F4350-62A0A

TRANSMISSION CONTROL VALVE

SOLENOID VALVE



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F4350-62A0A

TRANSMISSION CONTROL VALVE

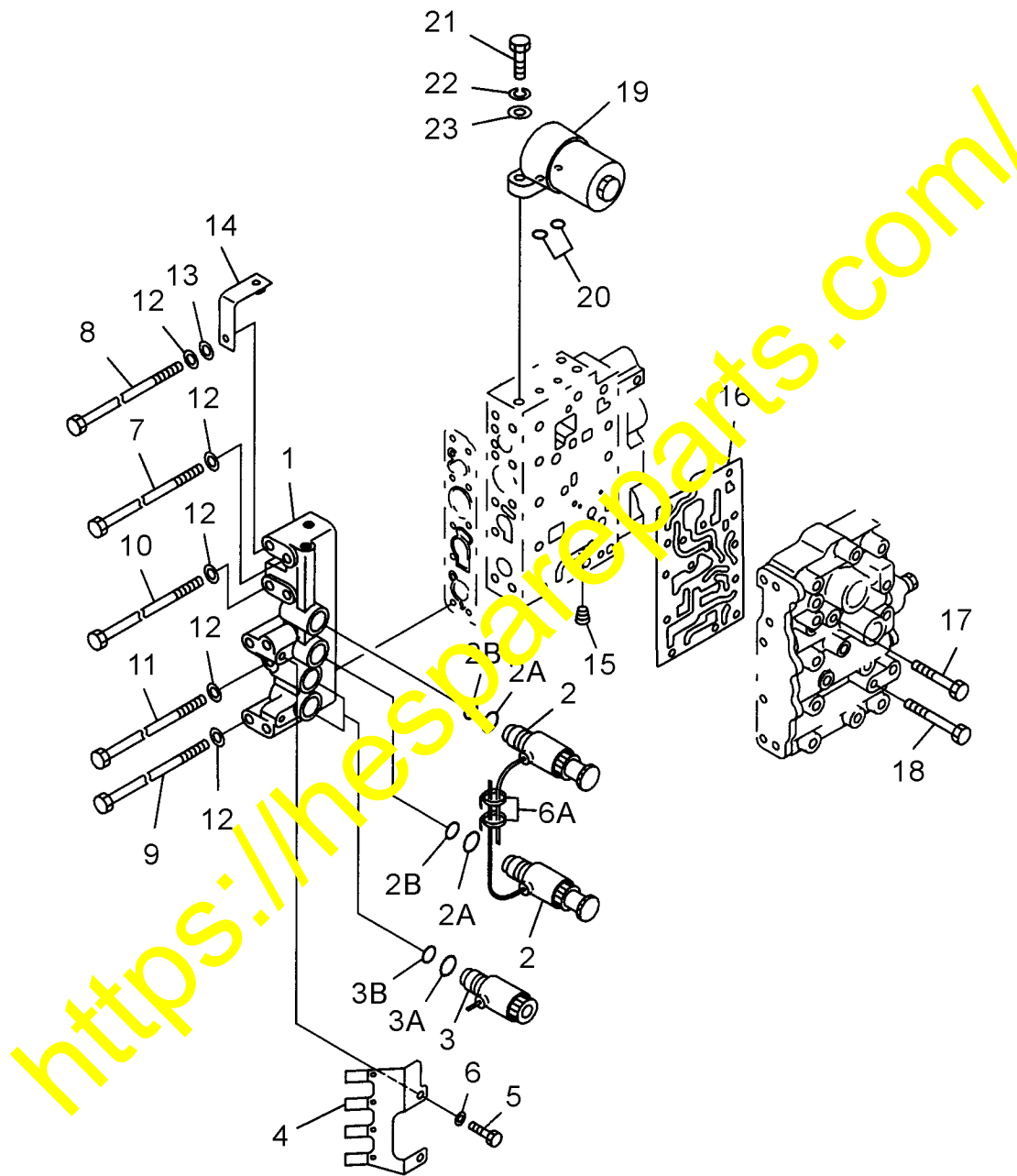
SOLENOID VALVE

| Item | Part Number | Description | Qty. | Ref. | Serial No. |
|------|--------------|--|------|------|------------|
| | | TRANSMISSION ASSEMBLY (SEE FIG. F4350-51A0) | 1 | | A80136- |
| | | . CONTROL VALVE ASSEMBLY (SEE FIG. F4350-59A0) | 1 | | A80136- |
| | | .. VALVE ASSEMBLY, LOWER (SEE FIG. F4350-61A0) | 1 | | A80136- |
| | 714-11-16900 | ... SOLENOID VALVE ASSEMBLY | 1 | | A80136- |
| 1 | 714-11-16800 | BODY ASSEMBLY | 1 | | A80136- |
| 2 | 714-11-16830 | SOLENOID VALVE | 2 | | A80136- |
| 2A | 714-11-16850 | O-RING (K2) | 1 | | A80136- |
| 2B | 07000-E2016 | O-RING (K2) | 1 | | A80136- |
| 3 | 714-11-16840 | SOLENOID VALVE | 2 | | A80136- |
| 3A | 714-11-16850 | O-RING (K2) | 1 | | A80136- |
| 3B | 07000-E2016 | O-RING (K2) | 1 | | A80136- |
| 4 | 714-11-16811 | BRACKET | 1 | | A80136- |
| 5 | 01010-80816 | BOLT | 2 | | A80136- |
| 6 | 01643-30823 | WASHER | 2 | | A80136- |
| 6A | 08034-00414 | BAND | 2 | | A80136- |
| 7 | 01010-81085 | BOLT | 1 | | A80136- |
| 8 | 01011-81015 | BOLT | 1 | | A80136- |
| 9 | 01011-81015 | BOLT | 4 | | A80136- |
| 10 | 01010-81085 | BOLT | 2 | | A80136- |
| 11 | 01010-81085 | BOLT | 1 | | A80136- |
| 12 | 01643-31032 | WASHER | 10 | | A80136- |
| 13 | 195-30-34260 | WASHER | 1 | | A80136- |
| 14 | 419-06-12840 | PLATE | 1 | | A80136- |
| 15 | 07043-70108 | PLUG | 1 | | A80136- |
| 16 | 419-15-16811 | .. GASKET (K2) | 1 | | A80136- |

F4350-62A0A

TRANSMISSION CONTROL VALVE

SOLENOID VALVE



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F4350-62A0A

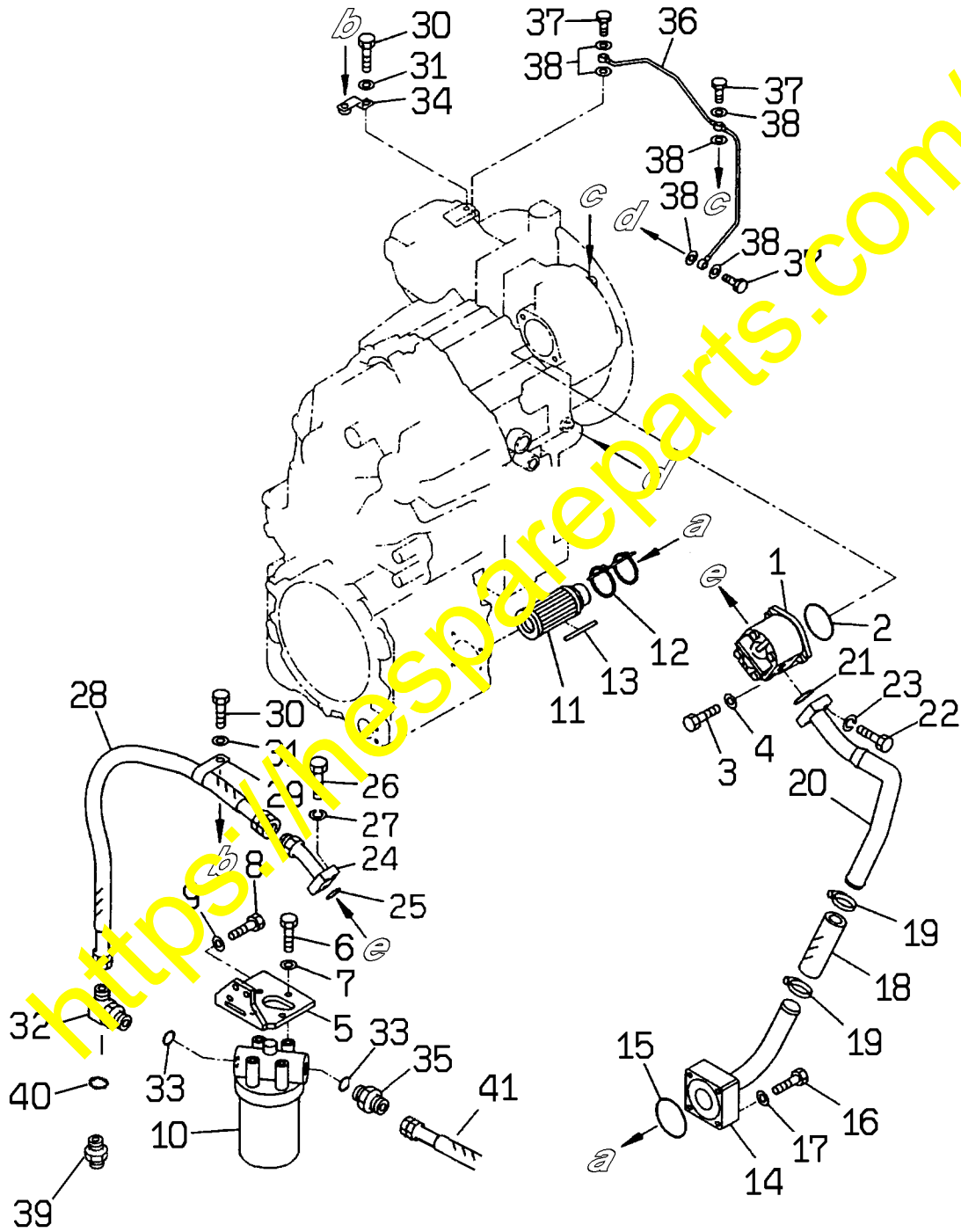
TRANSMISSION CONTROL VALVE

SOLENOID VALVE

| Item | Part Number | Description | Qty. | Ref. | Serial No. |
|------|--------------|------------------------------|------|------|------------|
| 17 | 01010-80860 | .. BOLT | 1 | | A80136- |
| 18 | 01010-80875 | .. BOLT | 1 | | A80136- |
| 19 | 419-15-16660 | .. FILTER ASSEMBLY | 1 | | A80136- |
| 20 | 07000-02014 | .. O- RING (K2) | 2 | | A80136- |
| 21 | 01010-81035 | .. BOLT | 2 | | A80136- |
| 22 | 01602-01030 | .. WASHER | 2 | | A80136- |
| 23 | 01642-21016 | .. WASHER | 2 | | A80136- |

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F4350-64A0
TRANSMSSION
PUMP AND PIPING



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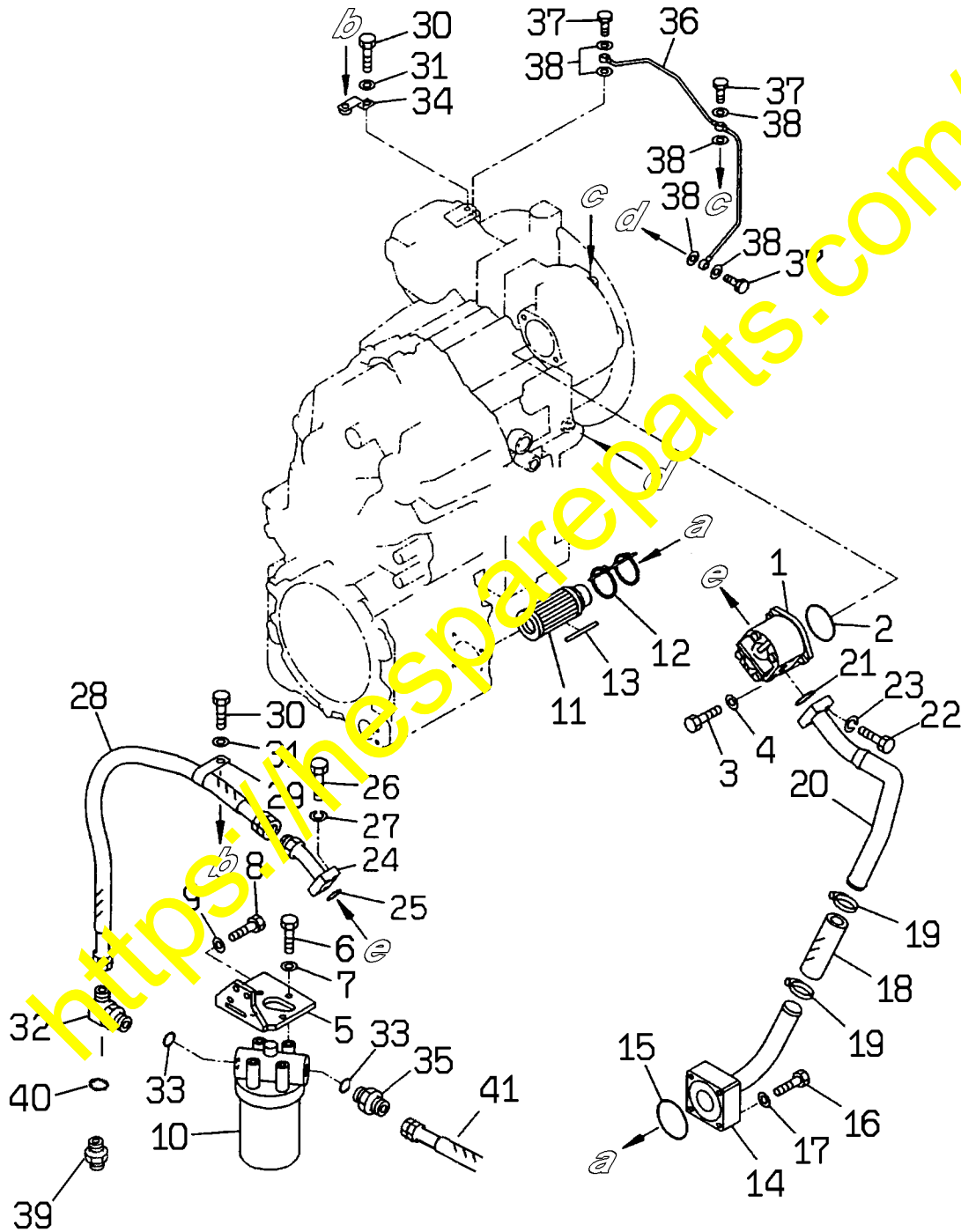
F4350-64A0

TRANSMISSION

PUMP AND PIPING

| Item | Part Number | Description | Qty. | Ref. | Serial No. |
|------|--------------|------------------------------------|------|------|------------|
| | | TRANSMISSION (SEE FIG. F4350-51A0) | 1 | | A80136- |
| 1 | 705-73-30010 | . PUMP | 1 | | A80136- |
| 2 | 07000-02085 | . O-RING | 1 | | A80136- |
| 3 | 01010-31030 | . BOLT | 2 | | A80136- |
| 4 | 01643-31032 | . WASHER | 2 | | A80136- |
| 5 | 714-11-18760 | . SUPPORT | 1 | | A80136- |
| 6 | 01010-81035 | . BOLT | 4 | | A80136- |
| 7 | 01643-31032 | . WASHER | 4 | | A80136- |
| 8 | 01010-31235 | . BOLT | 3 | | A80136- |
| 9 | 01643-31232 | . WASHER | 3 | | A80136- |
| 10 | 714-07-28701 | . FILTER | 1 | | A80136- |
| | 714-07-28711 | . . CARTRIDGE | 1 | | A80136- |
| | 419-15-14510 | . STRAINER ASSEMBLY | 1 | | A80136- |
| 11 | 419-15-14650 | . . STRAINER | 1 | | A80136- |
| 12 | 419-15-14661 | . . SPRING, SUPPORT | 1 | | A80136- |
| 13 | 417-15-14660 | . . MAGNET | 5 | | A80136- |
| 14 | 714-11-18850 | . FLANGE | 1 | | A80136- |
| 15 | 07000-02085 | . O-RING | 1 | | A80136- |
| 16 | 01010-81065 | . BOLT | 4 | | A80136- |
| 17 | 01643-31032 | . WASHER | 4 | | A80136- |
| 18 | 419-15-14752 | . HOSE | 1 | | A80136- |
| 19 | 07281-00489 | . CLAMP | 2 | | A80136- |
| 20 | 714-11-18860 | . TUBE | 1 | | A80136- |
| 21 | 07000-73035 | . O-RING | 1 | | A80136- |
| 22 | 01010-81035 | . BOLT | 4 | | A80136- |
| 23 | 01602-21030 | . WASHER, SPRING | 4 | | A80136- |
| 24 | 714-11-18760 | . TUBE | 1 | | A80136- |
| 25 | 07000-73028 | . O-RING | 1 | | A80136- |
| 26 | 01010-60835 | . BOLT | 4 | | A80136- |
| 27 | 01602-20825 | . WASHER, SPRING | 4 | | A80136- |
| 28 | 07102-20608 | . HOSE | 1 | | A80136- |
| 29 | 08036-23014 | . CLIP | 1 | | A80136- |
| 30 | 01010-81020 | . BOLT | 2 | | A80136- |
| 31 | 01643-31032 | . WASHER | 2 | | A80136- |

F4350-64A0
TRANSMSSION
PUMP AND PIPING



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F4350-64A0

TRANSMISSION**PUMP AND PIPING**

| Item | Part Number | Description | Qty. | Ref. | Serial No. |
|------|--------------|------------------------|------|------|------------|
| 32 | 714-11-18100 | . ELBOW. | 1 | | A80136- |
| 33 | 07002-03334 | . O-RING | 2 | | A80136- |
| 34 | 714-11-18880 | . PLATE. | 1 | | A80136- |
| 35 | 113-60-33270 | . NIPPLE | 1 | | A80136- |
| 36 | 714-11-18891 | . TUBE | 1 | | A80136- |
| 37 | 07206-30710 | . BOLT, JOINT. | 3 | | A80136- |
| 38 | 07005-01012 | . GASKET | 6 | | A80136- |
| 40 | 07040-11007 | . PLUG | 1 | | A80136- |
| 41 | 07002-11023 | . O-RING | 1 | | A80136- |

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