

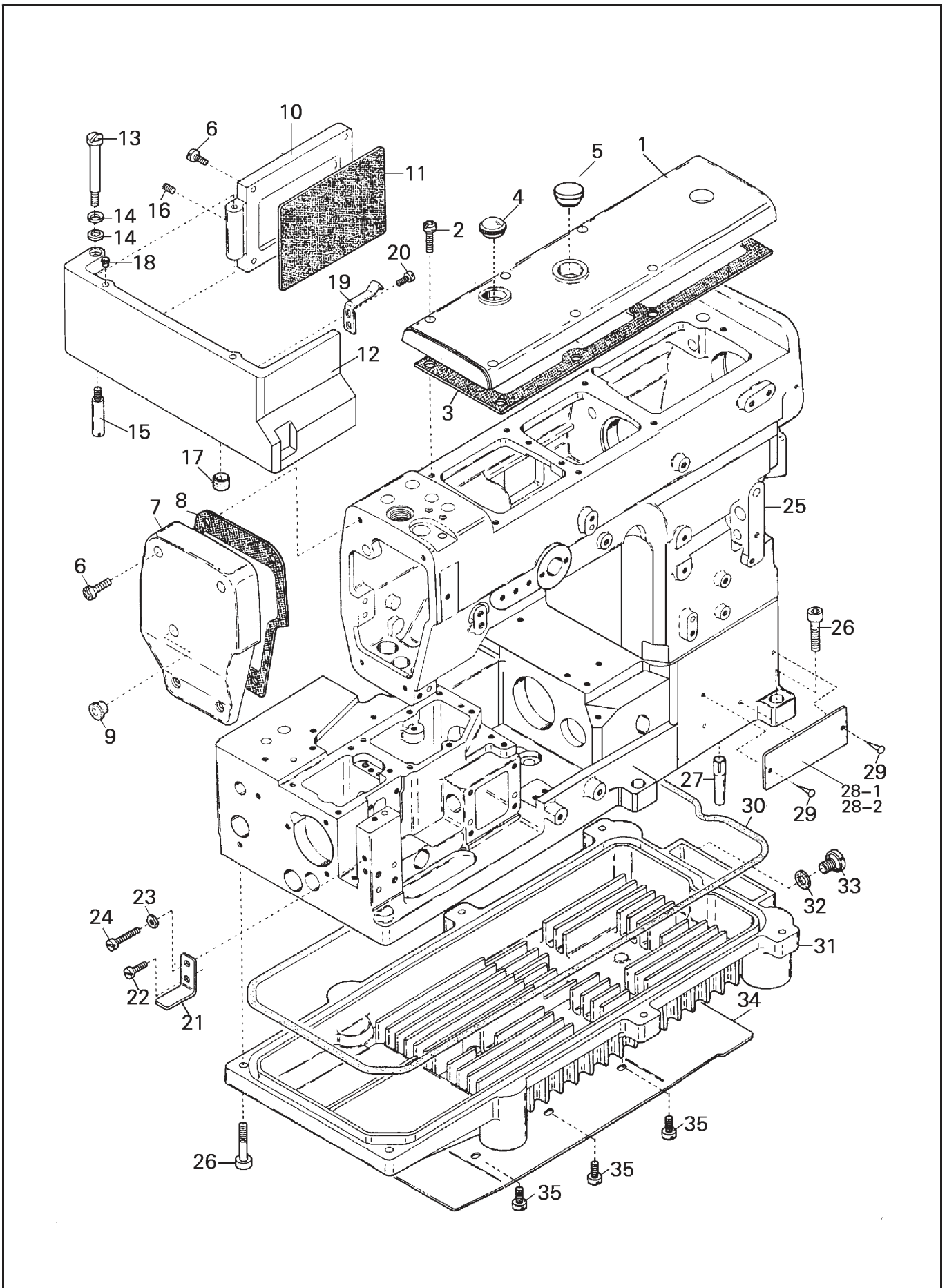
PARTS CATALOGUE

| | |
|--|----|
| 1. MISCELLANEOUS COVERS(1) | 2 |
| 2. MISCELLANEOUS COVERS(2) | 4 |
| 3. MISCELLANEOUS THREAD EYELETS | 6 |
| 4. MISCELLANEOUS BUSHINGS&EYE GUARD | 8 |
| 5. MAIN SHAFT DRIVING MECHANISM(1) | 10 |
| 5. MAIN SHAFT DRIVING MECHANISM(2) | 12 |
| 6. UPPER SHAFT & NEEDLE THREAD TAKE-UP MECHANISM | 14 |
| 7. NEEDLE BAR MECHANISM | 16 |
| 8. PRESSER FOOT MECHANISM | 18 |
| 9. SPREADER MECHANISM | 20 |
| 10. LOOPER DRIVING MECHANISM | 22 |
| 11. FEED DRIVING MECHANISM | 24 |
| 12. FEED DRIVING MECHANISM | 26 |
| 13. LUBRICATING MECHANISM | 28 |
| 14. ACCESSORIES | 30 |
| Index | 32 |
| Collar Special-use parts for 335 | 35 |
| Seam Special-use parts for 335 | 36 |
| Fold hem Special-use parts for 335 | 37 |
| SERIES GAUGE PARTS LIST | 38 |

INSTRUCTION BOOK

| | |
|--|----|
| 1. Introduction | 39 |
| 2. Specification | 39 |
| 3. Installation | 39 |
| 4. Sewing Speed and Setting Up of Pulley | 40 |
| 5. Lubrication | 40 |
| 6. Proper Operation | 42 |
| 7. Proper Adjusting | 44 |

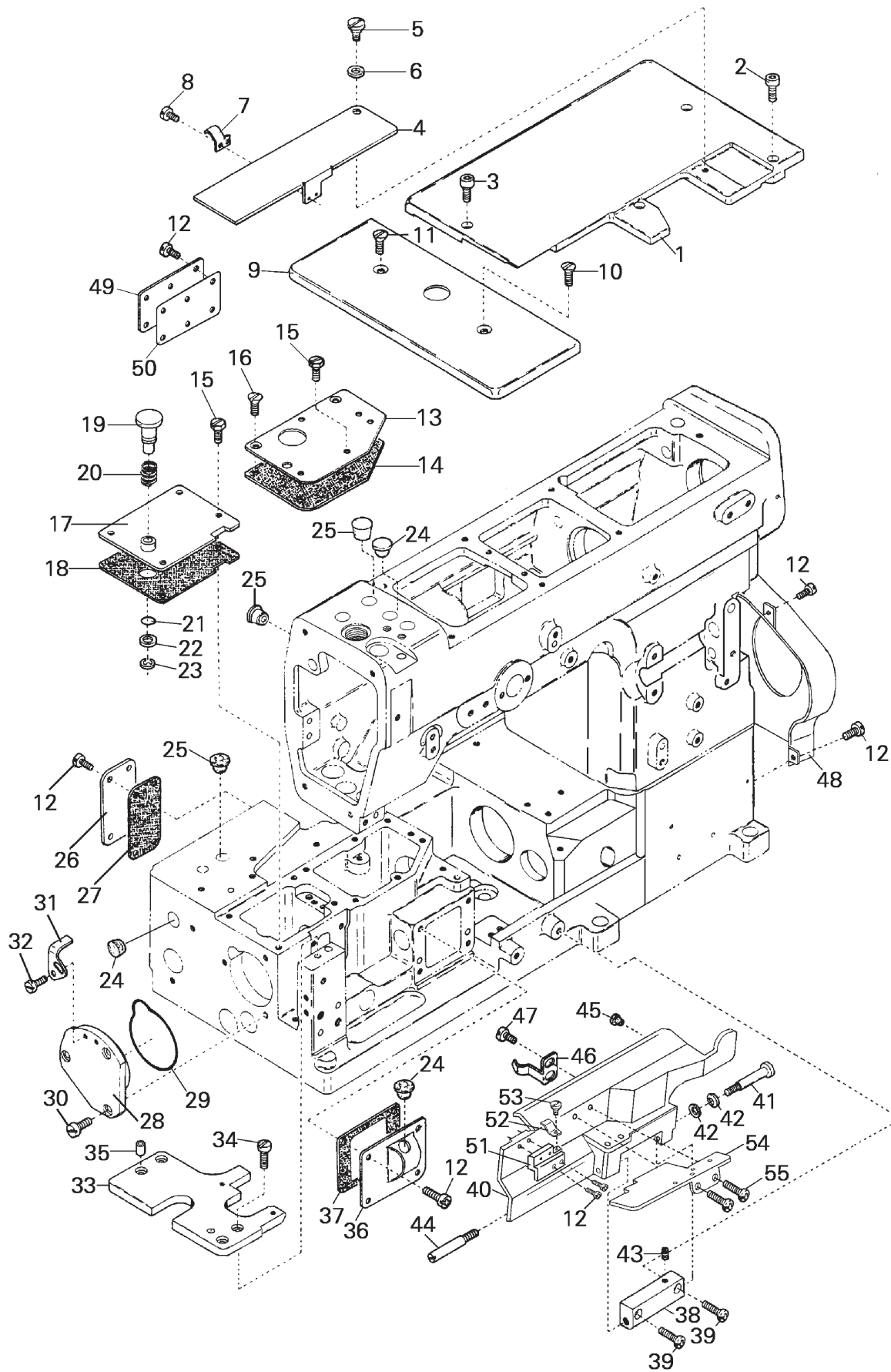
1. MISCELLANEOUS COVERS (1)



1. MISCELLANEOUS COVERS

| No | Ret. No. | Description | Qt | Note |
|------|--------------|------------------------------|----|------|
| 1 | 110130001--W | Top cover | 1 | |
| 2 | S150299023 | Screw | 7 | |
| 3 | 110130002 | Top cover gasket | 1 | |
| 4 | 022180001--V | Oil sight window | 1 | |
| 5 | 182100038--V | Rubber plug | 1 | |
| 6 | S150299032 | Head cover screw | 4 | |
| 7 | 110100035--W | Head cover | 1 | |
| 8 | 110100002 | Head cover gasket | 1 | |
| 9 | 110100003--W | Head cover seal plug | 1 | |
| 10 | 110160002--W | Bed rear cover | 1 | |
| 11 | 110160003 | Bed rear cover gasket | 1 | |
| 12 | 221140001--W | Side cover | 1 | |
| 13 | 110150003 | Screw | 1 | |
| 14 | S150603002 | Washer | 2 | |
| 15 | 110150004 | Screw | 1 | |
| 16 | S150299008 | Screw | 1 | |
| 17 | 110160004 | Rubber cushion | 1 | |
| 18 | 110150005 | Rubber cushion | 2 | |
| 19 | 221140002 | Cover latch spring | 1 | |
| 20 | S150202009 | Screw | 2 | |
| 21 | 221140003 | Side cover holder | 1 | |
| 22 | S150299031 | Screw | 1 | |
| 23 | S070125003 | Nut | 1 | |
| 24 | S150202013 | Screw | 1 | |
| 25 | 110190000 | Machine frame unit | 1 | |
| 26 | S150209058 | Screw | 6 | |
| 27 | 110100013 | Machine frame supporting bar | 4 | |
| 28-1 | 198000020 | Model plate | 1 | |
| 28-2 | 198000021 | Model plate | 1 | |
| 29 | BXF8899009 | Rivet | 2 | |
| 30 | 110310002 | Oil reservoir gasket | 1 | |
| 31 | 110310001 | Oil reservoir | 1 | |
| 32 | 028780001 | Drain hole seal | 1 | |
| 33 | 028700026 | Screw | 1 | |
| 34 | 110310005 | Wind guide plate | 1 | |
| 35 | S150202010 | Screw | 3 | |

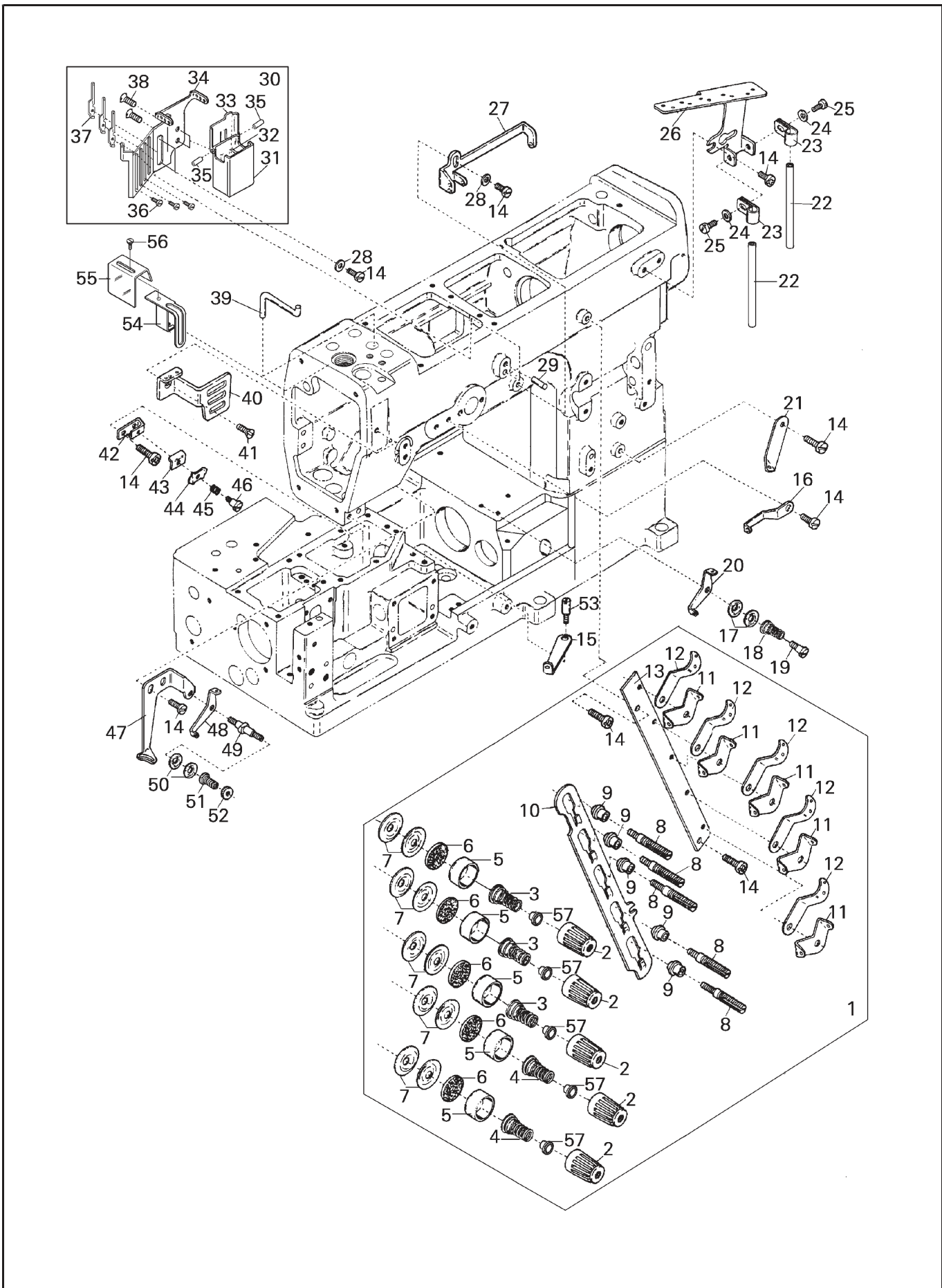
2. MISCELLANEOUS COVERS (2)



2. MISCELLANEOUS COVERS

| No | Ret. No. | Description | Qt | Note |
|----|--------------|-----------------------------------|----|------|
| 1 | 110100015--W | Cloth plate | 1 | |
| 2 | S150209050 | Screw | 3 | |
| 3 | S150220010 | Screw | 1 | |
| 4 | 110170003 | Looper thread take-up cover | 1 | |
| 5 | 110100019 | Screw | 1 | |
| 6 | S150603003 | Conical spring washer | 1 | |
| 7 | 110170002 | Take-up cover spring | 1 | |
| 8 | S150202028 | Screw | 2 | |
| 9 | 221100029--W | Cloth plate (small) | 1 | |
| 10 | S150203013 | Screw | 1 | |
| 11 | S150203005 | Screw | 1 | |
| 12 | S150299035 | Screw | 19 | |
| 13 | 110100007 | Bed top cover (right) | 1 | |
| 14 | 110100008 | Bed top cover (right) gasket | 1 | |
| 15 | S150103001 | Screw | 8 | |
| 16 | S150203002 | Screw | 2 | |
| 17 | 110411001 | Bed top cover | 1 | |
| 18 | 110400001 | Gasket | 1 | |
| 19 | 110410001 | Feed regulating pushbutton | 1 | |
| 20 | 110410002 | Feed regulating pushbutton spring | 1 | |
| 21 | S150651005 | O - ring | 1 | |
| 22 | 110410003 | Washer | 1 | |
| 23 | S150620004 | Retaining ring | 1 | |
| 24 | 110100003 | Seal plug | 4 | |
| 25 | 110100026--V | Seal plug | 2 | |
| 26 | 110100011 | Bed rear cover (small) | 1 | |
| 27 | 110100012 | Bed rear cover (small) gasket | 1 | |
| 28 | 110500012 | Ball bearing housing | 1 | |
| 29 | 110500013 | Oil-ring | 1 | |
| 30 | S150299031 | Screw | 3 | |
| 31 | 110500014 | Pushbutton stop | 1 | |
| 32 | S150202009 | Screw | 2 | |
| 33 | 221100028 | Stitch plate support | 1 | |
| 34 | S150299031 | Screw | 4 | |
| 35 | 182100045 | Knock pin | 2 | |
| 36 | 110100009 | Bed front cover | 1 | |
| 37 | 110100010 | Bed front cover gasket | 1 | |
| 38 | 110150002 | Front cover hinge | 1 | |
| 39 | S150216013 | Screw | 2 | |
| 40 | 221130001--W | Front cover | 1 | |
| 41 | 110150003 | Screw | 1 | |
| 42 | S150603002 | Conical spring washer | 2 | |
| 43 | S150299008 | Screw | 2 | |
| 44 | 110150004 | Screw | 1 | |
| 45 | 110150005 | Rubber cushion (small) | 2 | |
| 46 | 221130002 | Front cover spring | 2 | |
| 47 | S150216017 | Screw | 1 | |
| 48 | 221100030 | Bed rear cover | 2 | |
| 49 | 110100016--W | Rear cover | 1 | |
| 50 | 110100017 | Rear cover gasket | 1 | |
| 51 | 221100042 | Material guide piece | 1 | |
| 52 | 221100043 | Material guide plate | 1 | |
| 53 | 110400023 | Screw | 1 | |
| 54 | 221130004 | Front cover plate | 1 | |
| 55 | S150202016 | Screw | 2 | |

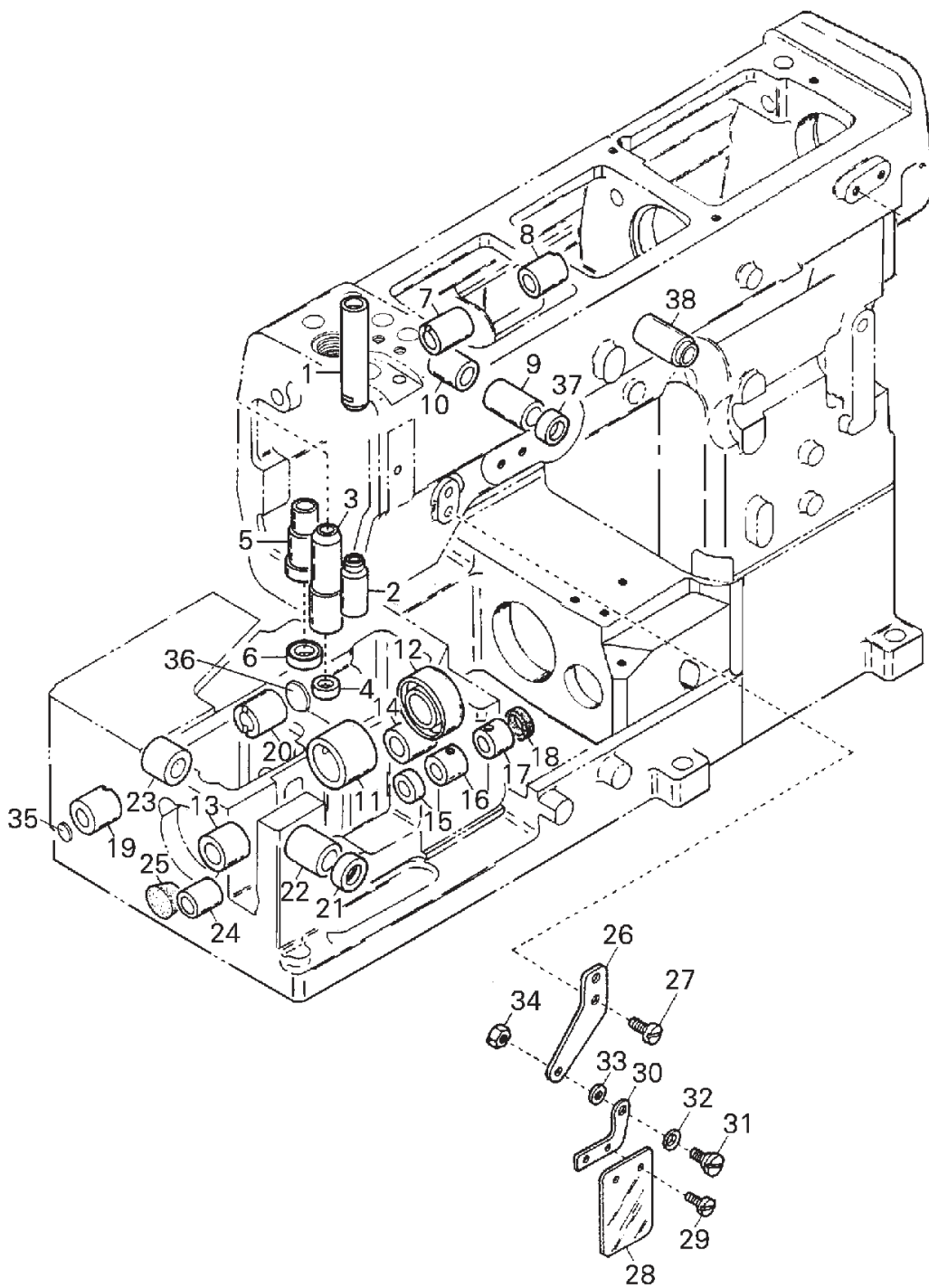
3. MISCELLANEOUS THREAD EYELETS



3. MISCELLANEOUS THREAD EYELETS

| No | Ret. No. | Description | Qt | Note |
|----|--------------|----------------------------------|----|------|
| 1 | 1102H0000--W | Looper thread retainer | 1 | |
| 2 | 028283005 | Thread tension spring cap | 5 | |
| 3 | 155A10005 | Needle thread tension spring | 3 | |
| 4 | 155A10004 | Top cover thread spring | 2 | |
| 5 | 1102H0005 | Thread tension spring retainer | 5 | |
| 6 | 028283007 | Felt | 5 | |
| 7 | 022160005 | Tension disc | 10 | |
| 8 | 1102H0003 | Tension post | 5 | |
| 9 | 1102H0004 | Tension post ferrule | 5 | |
| 10 | 1102H0002 | Tension disc separator | 1 | |
| 11 | 116200016 | Tension disc eyelet | 5 | |
| 12 | 116200015 | Thread lead-in guide | 5 | |
| 13 | 1102H0001 | Tension post support | 1 | |
| 14 | S150299035 | Screw | 12 | |
| 15 | 110500019 | Looper thread disc | 1 | |
| 16 | 110200019 | Top cover thread eyelet (left) | 1 | |
| 17 | 008200068 | Supplementary tension disc | 2 | |
| 18 | 008200067 | Supplementary tension spring | 1 | |
| 19 | 221290002 | Screw | 1 | |
| 20 | 221290001 | Looper thread disc | 2 | |
| 21 | 110500020 | Looper thread eyelet (long) | 5 | |
| 22 | 116250003 | Thread eyelet pipe(short) | 2 | |
| 23 | 116250002 | Thread eyelet pipe stay | 2 | |
| 24 | 008230003 | Washer | 2 | |
| 25 | S150299035 | Screw | 2 | |
| 26 | 116250001 | Thread guide plate | 1 | |
| 27 | 110200027 | Top cover thread eyelet (right) | 1 | |
| 28 | 008230003 | Washer | 2 | |
| 29 | 110100027 | Guide pin | 1 | |
| 30 | 1102K0000 | SP Device complete set | 1 | |
| 31 | 1102K0001--W | SP Container | 1 | |
| 32 | 1102K0004 | Felt | 1 | |
| 33 | 1102K0003 | SP container cover | 1 | |
| 34 | 221100015 | Needle thread eyelet | 1 | |
| 35 | S150405005 | Pin | 2 | |
| 36 | S150216029 | Screw | 3 | |
| 37 | 221100014 | Looper thread disc | 3 | |
| 38 | S150221003 | Screw | 2 | |
| 39 | 110200026 | Needle thread guide | 1 | |
| 40 | 110200009 | Needle thread eyelet | 1 | |
| 41 | S150203013 | Screw | 1 | |
| 42 | 110260004 | Needle thread retainer support | 1 | |
| 43 | 110260003 | Thread retainer disc support | 1 | |
| 44 | 110260001 | Needle thread retainer disc | 1 | |
| 45 | 110260005 | Needle thread retainer spring | 1 | |
| 46 | 110260002 | Screw | 1 | |
| 47 | 1102C0001 | Top cover thread guide | 2 | |
| 48 | 1102C0002 | Supplementary thread guide | 1 | |
| 49 | 116200018 | Tension post | 1 | |
| 50 | 008200068 | Supplementary tension disc | 2 | |
| 51 | 008200067 | Supplementary tension spring | 1 | |
| 52 | 008200088 | Nut | 1 | |
| 53 | 110500022 | Screw | 1 | |
| 54 | 197120001 | Needle bar protection cover | 1 | |
| 55 | 197120002 | Needle bar protection board | 1 | |
| 56 | 197120003 | Screw | 1 | |
| 57 | 155A10007 | Collar | 5 | |

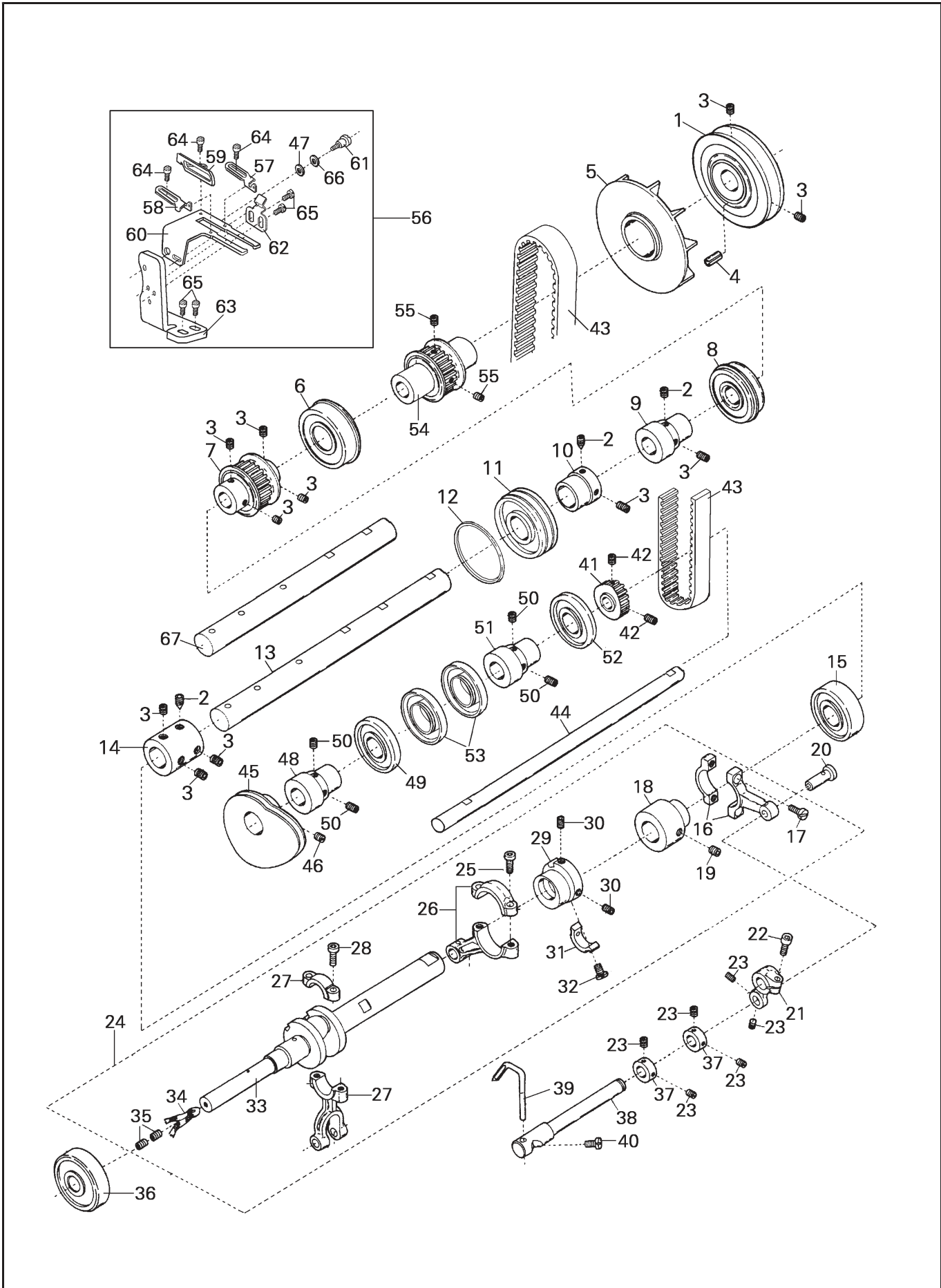
4. MISCELLANEOUS BUSHINGS&EYE GUARD



4. MISCELLANEOUS BUSHINGS&EYE GUARD

| No | Ret. No. | Description | Qt | Note |
|----|--------------|---|----|------|
| 1 | 221200001 | Needle bar bushing(upper) | 1 | |
| 2 | 110200003 | Needle bar bushing(lower) | 1 | |
| 3 | 110600007 | Presser bar bushing | 1 | |
| 4 | 110600005 | Oil seal | 1 | |
| 5 | 110200018 | Spreader driving bar bushing | 1 | |
| 6 | 008600015 | Oil seal | 1 | |
| 7 | 110200016 | Spreader driving shaft bushing (left) | 1 | |
| 8 | 110200017 | Spreader driving shaft bushing (right) | 1 | |
| 9 | 110200008 | Needle thread take-up bushing(front) | 1 | |
| 10 | 110200007 | Needle thread take-up bushing(rear) | 1 | |
| 11 | 110500004 | Lower shaft bushing (left) | 1 | |
| 12 | 1105E0000 | Oil seal | 1 | |
| 13 | 110500017 | Looper rocker shaft bushing (left) | 1 | |
| 14 | 110500016 | Looper rocker shaft bushing (right) | 1 | |
| 15 | 110500024 | Oil seal | 1 | |
| 16 | 110500008 | Looper driving shaft bushing (front) | 1 | |
| 17 | 110500009 | Looper driving shaft bushing (rear) | 1 | |
| 18 | 110500025--V | Seal plug | 1 | |
| 19 | 110400004 | Feed bar driving shaft bushing (left) | 1 | |
| 20 | 110400003 | Feed bar driving shaft bushing (right) | 1 | |
| 21 | 110500023 | Oil seal | 1 | |
| 22 | 110400004 | Looper driving shaft bushing (front) | 1 | |
| 23 | 110400003 | Looper driving shaft bushing (rear) | 1 | |
| 24 | 110400017 | Differential lever shaft bushing | 1 | |
| 25 | 110100031 | Seal plug | 1 | |
| 26 | 110140002 | Eye guard support | 1 | |
| 27 | S150201014 | Screw | 1 | |
| 28 | 116120001 | Eye guard | 1 | |
| 29 | S150202004 | Screw | 2 | |
| 30 | 110140001 | Eye guard holder | 1 | |
| 31 | 110100019 | Screw | 1 | |
| 32 | S150603003 | Conical spring washer | 1 | |
| 33 | 008230003 | Washer | 1 | |
| 34 | S150503003 | Nut | 1 | |
| 35 | 110100029 | Seal plug (left) | 1 | |
| 36 | 110100030 | Seal plug (right) | 1 | |
| 37 | 110280000 | Oil seal | 1 | |
| 38 | 110600009 | Foot lifter lever bushing | 1 | |

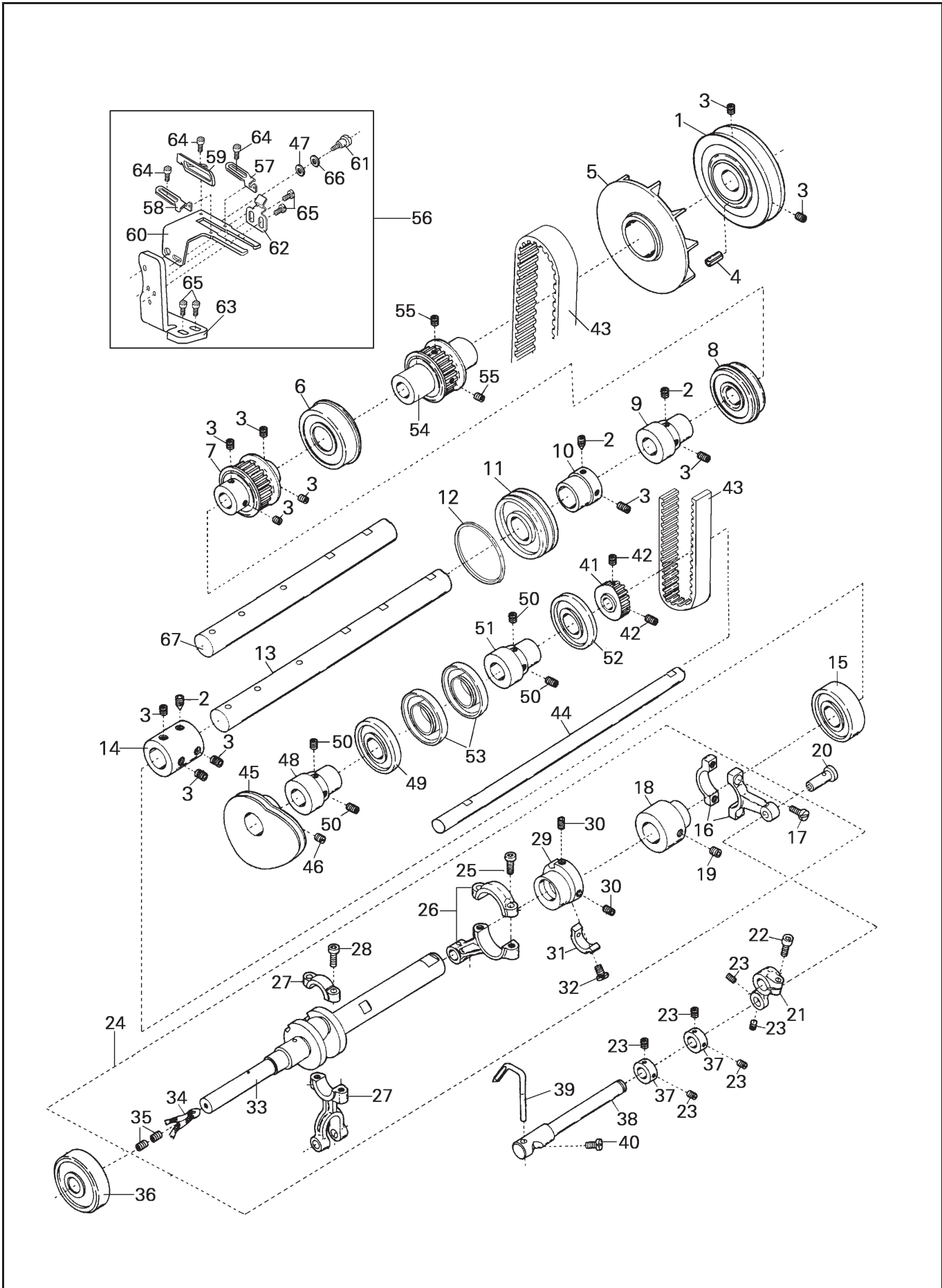
5. MAIN SHAFT DRIVING MECHANISM (1)



5. MAIN SHAFT DRIVING MECHANISM

| No | Ret. No. | Description | Qt | Note |
|----|------------|-------------------------------|----|------|
| 1 | 221100039 | Pulley | 1 | |
| 2 | S150299016 | Screw | 3 | |
| 3 | S150299029 | Screw | 12 | |
| 4 | S150299036 | Roll pin | 1 | |
| 5 | 110500001 | Oil cooling fan | 1 | |
| 6 | S150801018 | Ball bearing (right) | 1 | |
| 7 | 221200020 | Timing belt pulley | 1 | |
| 8 | S150801016 | Ball bearing (middle) | 1 | |
| 9 | 110320001 | Oil pump driving worm | 1 | |
| 10 | 1102F0001 | Ball bearing (left) | 1 | |
| 11 | S150801007 | Ball bearing (left) | 1 | |
| 12 | 110500026 | O-ring | 1 | |
| 13 | 221100036 | Lower shaft (right) | 1 | |
| 14 | 110530001 | Lower shaft joint | 1 | |
| 15 | S150801003 | Ball bearing | 1 | |
| 16 | 110550001 | Needle guard connecting rod | 1 | |
| 17 | 110550005 | Screw | 2 | |
| 18 | 110550002 | Needle guard eccentric | 1 | |
| 19 | S150299028 | Screw | 2 | |
| 20 | 110550003 | Connecting rod pin | 1 | |
| 21 | 110550004 | Needle guard diving shaft arm | 1 | |
| 22 | S150209052 | Screw | 1 | |
| 23 | S150202004 | Screw | 6 | |
| 24 | 2212A0000 | Main shaft front joint assy | 1 | |
| 25 | S150299026 | Screw | 1 | |
| 26 | 1105C0000 | Looper shaft ball link assy | 1 | |
| 27 | 110570000 | Looper rocker connecting rod | 1 | |
| 28 | S150299026 | Screw | 4 | |
| 29 | 110590001 | Looper thread take-up | 1 | |
| 30 | S150299028 | Screw | 2 | |
| 31 | 110500011 | Counterweight | 1 | |
| 32 | S150299030 | Screw | 2 | |
| 33 | 221200024 | Lower crankshaft | 1 | |
| 34 | 110300001 | Oil wick | 1 | |
| 35 | S150299027 | Screw | 2 | |
| 36 | S150801019 | Ball bearing | 1 | |
| 37 | 110500006 | Collar | 2 | |
| 38 | 110500005 | Needle guard diving shaft | 1 | |
| 39 | 110500027 | Needle guard | 1 | |
| 40 | SFB0201002 | Screw | 1 | |
| 41 | 221200021 | Timing belt pulley (front) | 1 | |
| 42 | S150299028 | Screw | 2 | |
| 43 | 221200022 | Timing belt | 1 | |
| 44 | 221200023 | Guide shaft | 1 | |
| 45 | 221260000 | Cam complete set | 1 | |
| 46 | S150299028 | Screw | 2 | |
| 47 | S150607009 | Washer | 1 | |
| 48 | 221270001 | Ball bearing holder (left) | 1 | |
| 49 | S150801101 | Ball bearing (61802-2ZNR) | 1 | |
| 50 | S150299027 | Screw | 4 | |

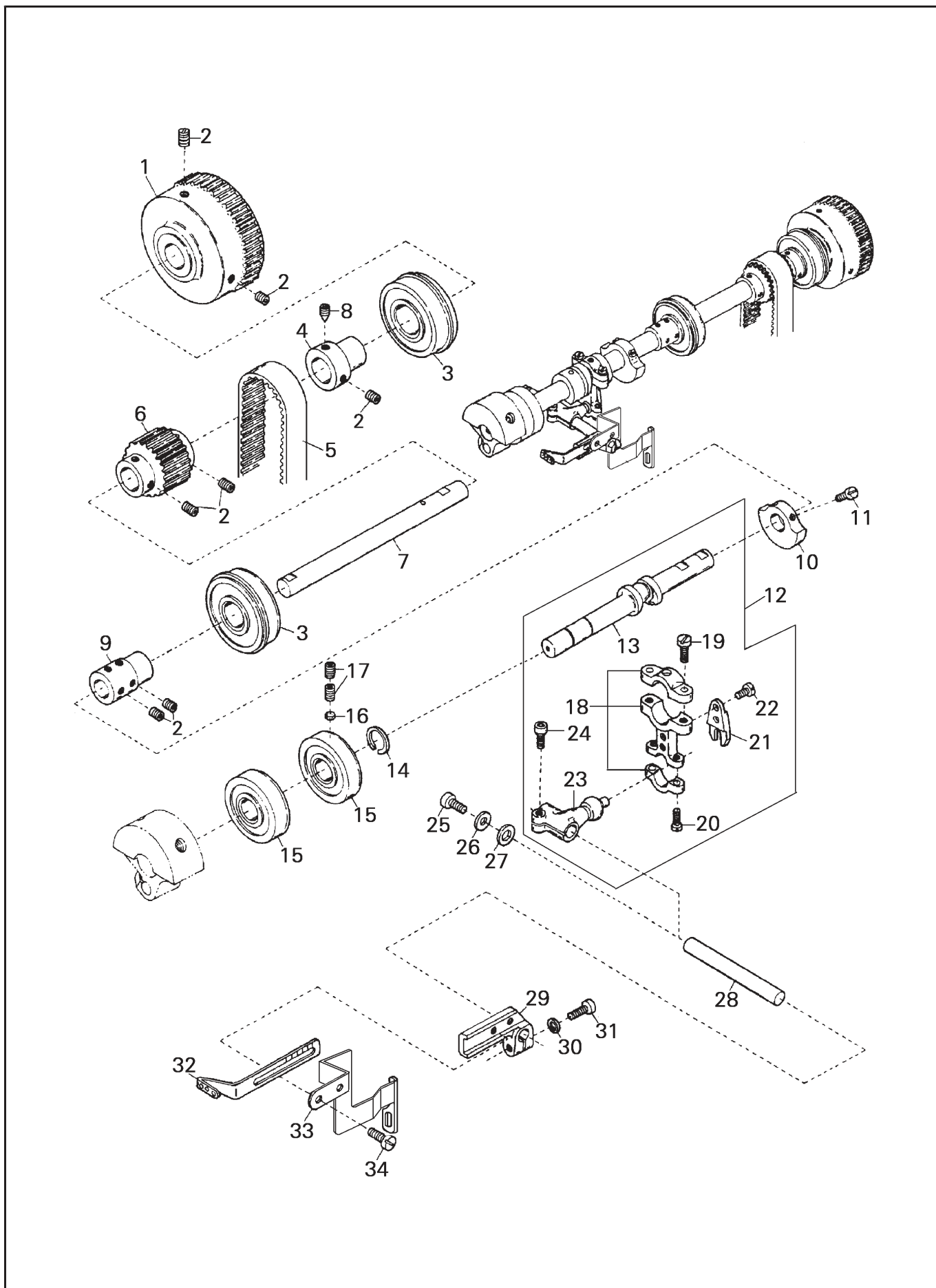
5. MAIN SHAFT DRIVING MECHANISM (2)



5. MAIN SHAFT DRIVING MECHANISM

| No | Ret. No. | Description | Qt | Note |
|----|------------|-------------------------------------|----|------|
| 51 | 221280001 | Ball bearing holder (right) | 1 | |
| 52 | S150801102 | Ball bearing (61803-2ZNR) | 1 | |
| 53 | S150655002 | Oil seal | 2 | |
| 54 | 221240000 | Timing belt pulley assy | 1 | |
| 55 | S150299028 | Screw | 2 | |
| 56 | 221250000 | Tension take-up stripper plate assy | 1 | |
| 57 | 221250001 | Thread guard plate (right) | 1 | |
| 58 | 221250002 | Thread guard plate (left) | 1 | |
| 59 | 221250003 | Thread guard plate | 1 | |
| 60 | 221250004 | Supporting plate | 1 | |
| 61 | 221250005 | Screw | 1 | |
| 62 | 221250006 | Supporting plate | 1 | |
| 63 | 221250007 | Linked plank | 1 | |
| 64 | S150209138 | Screw | 5 | |
| 65 | S150299031 | Screw | 2 | |
| 66 | S150603002 | Conical spring washer | 1 | |
| 67 | 221200025 | Lower shaft | 1 | |

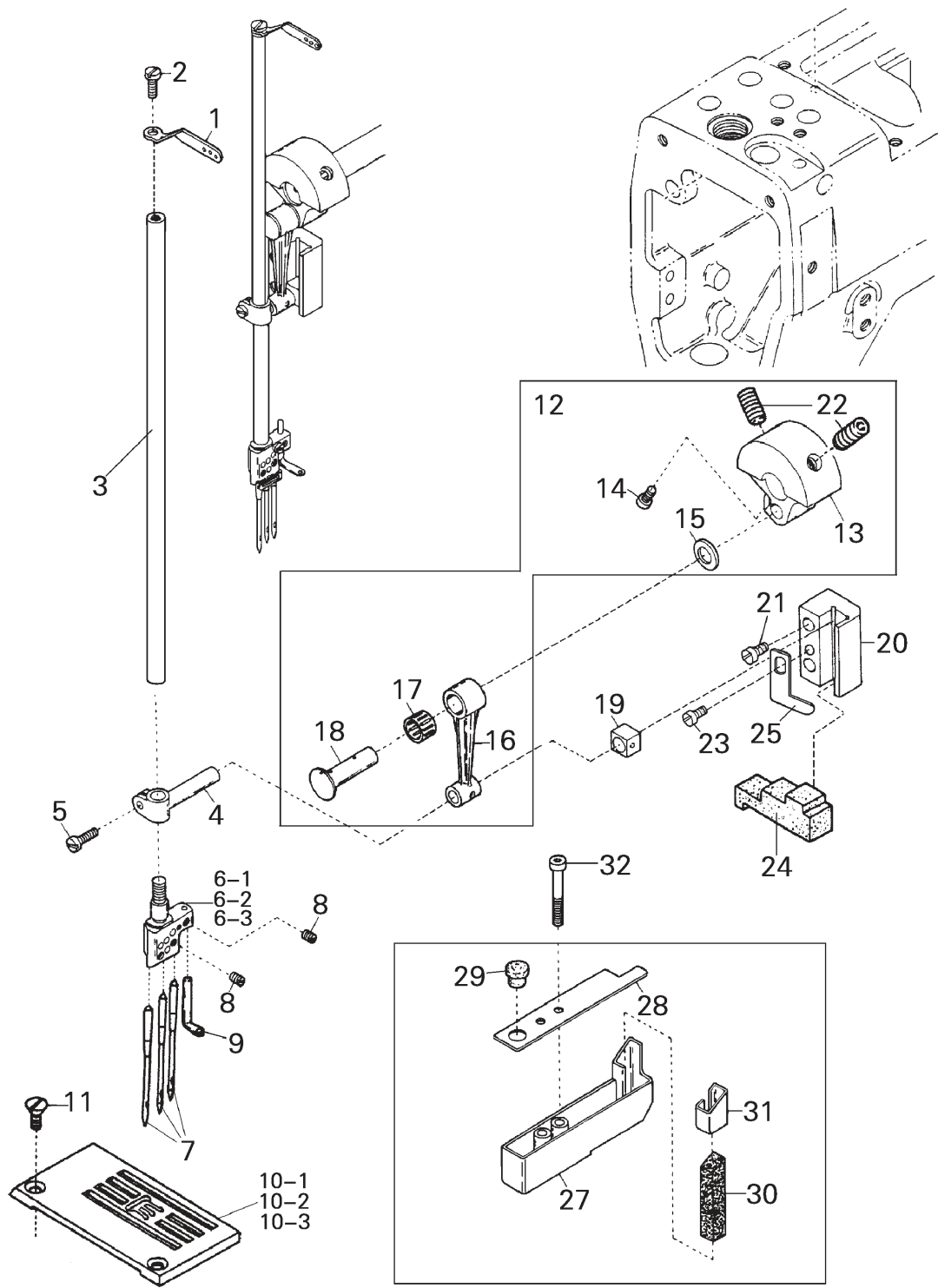
6. UPPER SHAFT & NEEDLE THREAD TAKE-UP MECHANISM



6. UPPER SHAFT & NEEDLE THREAD TAKE-UP MECHANISM

| No | Ret. No. | Description | Qt | Note |
|----|------------|-----------------------------|----|------|
| 1 | 1102E0003 | Handwheel | 1 | |
| 2 | S150299029 | Screw | 11 | |
| 3 | S150801016 | Ball bearing | 2 | |
| 4 | 1102F0001 | Handwheel adapter | 2 | |
| 5 | 110200023 | Timing belt | 1 | |
| 6 | 1102G0001 | Upper shaft sprocket(upper) | 1 | |
| 7 | 110200021 | Upper shaft (right) | 1 | |
| 8 | S150299016 | Screw | 1 | |
| 9 | 1102D0001 | Upper shaft joint | 1 | |
| 10 | 110200022 | Counterweight(small) | 1 | |
| 11 | S150299035 | Screw | 2 | |
| 12 | 110G30000 | Connecting rod | 1 | |
| 13 | 110200020 | Upper crank shaft | 1 | |
| 14 | S150617006 | Retaining ring | 1 | |
| 15 | S150801014 | Ball bearing | 2 | |
| 16 | 110200024 | Rubber seat | 1 | |
| 17 | S150299029 | Screw | 1 | |
| 18 | 110270001 | Connecting rod | 2 | |
| 19 | S150209049 | Screw | 2 | |
| 20 | 110550005 | Screw | 2 | |
| 21 | 110270002 | Guide fork | 1 | |
| 22 | S150299036 | Screw | 2 | |
| 23 | 110270003 | Driving lever | 1 | |
| 24 | S150299025 | Screw | 1 | |
| 25 | S150202016 | Screw | 1 | |
| 26 | 110200005 | Washer | 1 | |
| 27 | 110200006 | Spacer | 1 | |
| 28 | 110200004 | Driving shaft | 1 | |
| 29 | 110290001 | Bracket | 1 | |
| 30 | S150602006 | Spring washer | 1 | |
| 31 | S150299002 | Screw | 1 | |
| 32 | 110290005 | Needle thread take-up | 1 | |
| 33 | 110290004 | Top cover thread take-up | 1 | |
| 34 | S150299035 | Screw | 2 | |

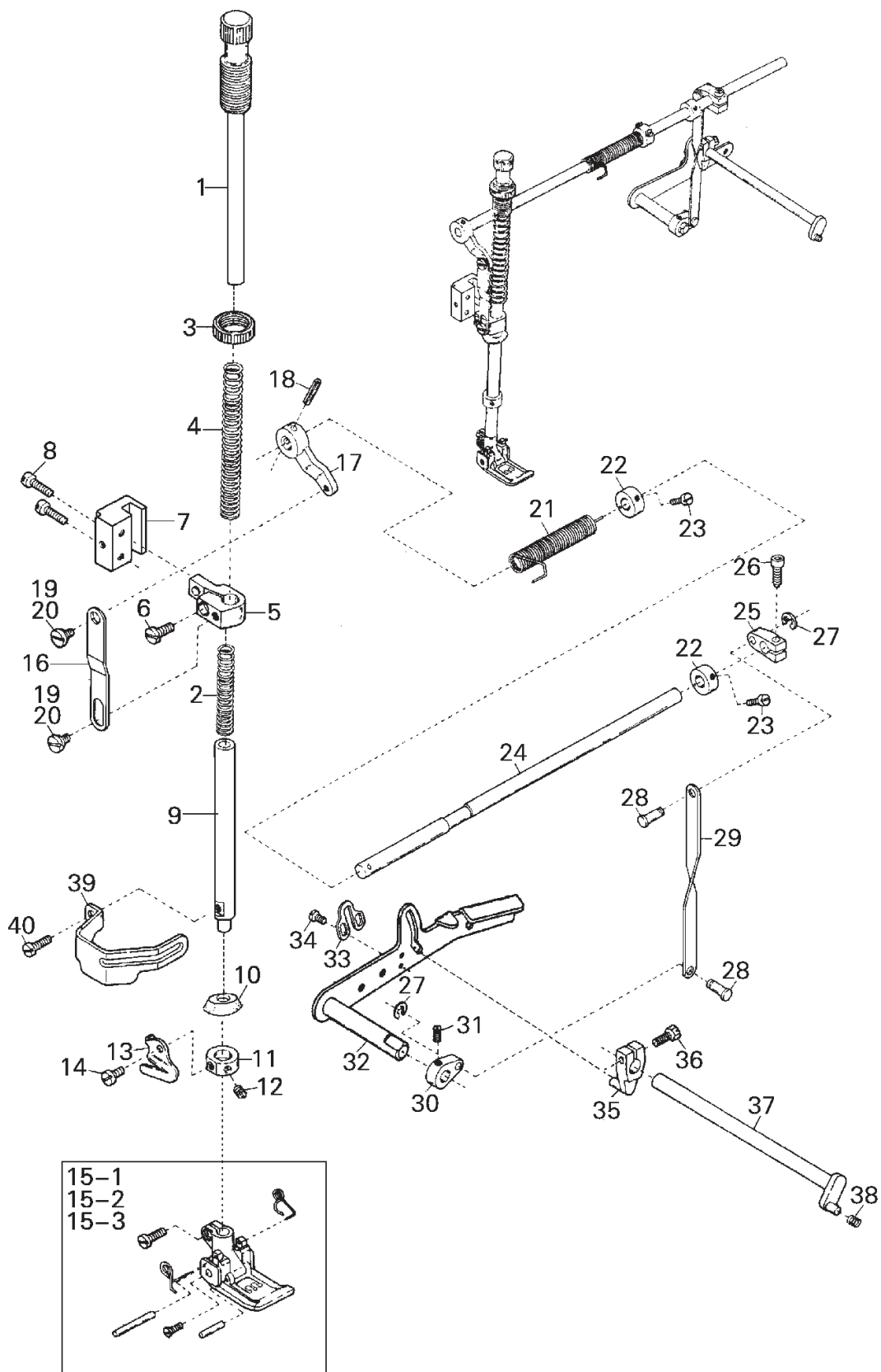
7. NEEDLE BAR MECHANISM



7. NEEDLE BAR MECHANISM

| No | Ret. No. | Description | Qt | Note |
|------|------------|----------------------------|----|------|
| 1 | 116240002 | Needle bar thread eyelet | 1 | |
| 2 | 110240003 | Screw | 1 | |
| 3 | 110200001 | Needle bar | 1 | |
| 4 | 110220005 | Needle bar bracket | 1 | |
| 5 | 022100006 | Screw | 1 | |
| 6-1 | 182610006 | Needle clamp (5.6) | 1 | |
| 6-2 | 182610005 | Needle clamp (4.8) | 1 | |
| 6-3 | 182610007 | Needle clamp (6.4) | 1 | |
| 7 | S150901012 | Needle | 3 | |
| 8 | 182610010 | Screw | 4 | |
| 9 | 182610009 | Top cover thread eyelet | 1 | |
| 10-1 | 110400039 | Stitch plate (5.6) | 1 | |
| 10-2 | 110G00003 | Stitch plate (6.4) | 1 | |
| 10-3 | 110400038 | Stitch plate (4.8) | 1 | |
| 11 | 110400023 | Screw | 2 | |
| 12 | 110220000 | Counterweight complete set | 1 | |
| 13 | 110220001 | Counterweight | 1 | |
| 14 | S150299003 | Screw | 1 | |
| 15 | 110220003 | Connecting rod ring | 1 | |
| 16 | 110220004 | Connecting rod | 1 | |
| 17 | S150801028 | Roller bearing | 1 | |
| 18 | 110220002 | Connecting rod pin | 1 | |
| 19 | 110220006 | Slide block | 1 | |
| 20 | 110230001 | Needle bar guide | 1 | |
| 21 | S150299033 | Screw | 2 | |
| 22 | S150299009 | Screw | 2 | |
| 23 | S150299030 | Screw | 1 | |
| 24 | 110200032 | Sponge | 1 | |
| 25 | 110200033 | Fixing plate | 1 | |
| 26 | 110240000 | HR Device, complete set | 1 | |
| 27 | 110240001 | HR Cup | 1 | |
| 28 | 110250001 | HR Cup lid | 1 | |
| 29 | 110100003 | Seal plug | 1 | |
| 30 | 110240002 | HR Felt | 1 | |
| 31 | 110240003 | HR Felt guard | 1 | |
| 32 | S150209051 | Screw | 2 | |

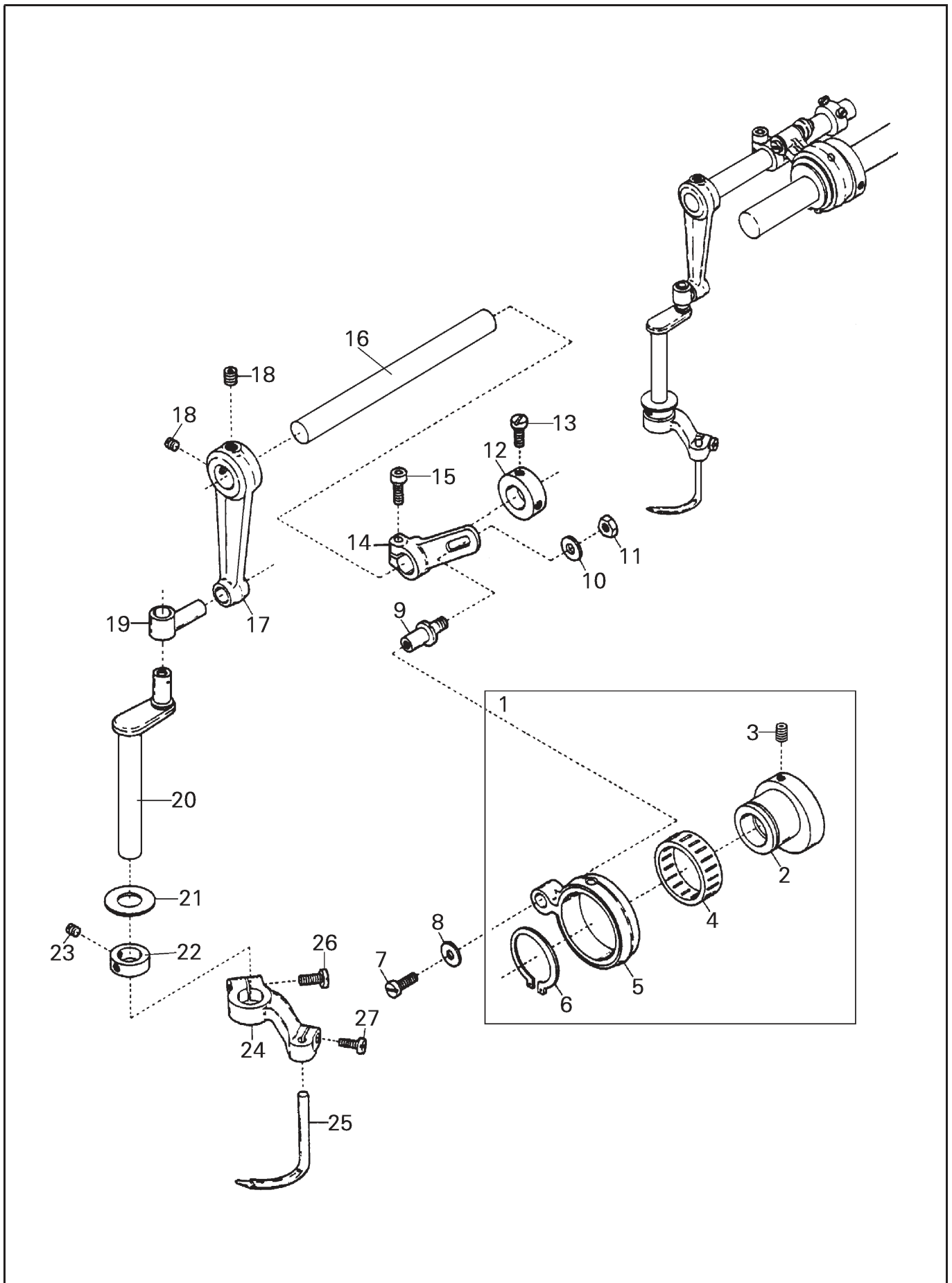
8. PRESSER FOOT MECHANISM



8. PRESSER FOOT MECHANISM

| No | Ret. No. | Description | Qt | Note |
|------|--------------|-------------------------------------|----|------|
| 1 | 110610001 | Presser spring regulator | 1 | |
| 2 | 110600014 | Adjusting inner spring | 1 | |
| 3 | 110610002 | Lock nut | 1 | |
| 4 | 110600001 | Presser bar spring(outer) | 1 | |
| 5 | 110620000 | Presser bar connecting bracket unit | 1 | |
| 6 | S150216013 | Screw | 1 | |
| 7 | 110600004 | Presser bar guide | 1 | |
| 8 | S150299033 | Screw | 2 | |
| 9 | 110600003 | Presser bar | 1 | |
| 10 | 110600005--V | Oil protector ring | 1 | |
| 11 | 110600006 | Collar | 1 | |
| 12 | S150299027 | Screw | 2 | |
| 13 | 110600013 | Thread chain cutting knife | 1 | |
| 14 | S150216029 | Screw | 1 | |
| 15-1 | 110697000 | Presser foot, complete set (5.6) | 1 | |
| 15-2 | 110693000 | Presser foot, complete set (4.8) | 1 | |
| 15-3 | 110692000 | Presser foot, complete set (6.4) | 1 | |
| 16 | 110630004 | Lifter link | 1 | |
| 17 | 110630002 | Lifter link lever | 1 | |
| 18 | S150405017 | Fastener pin | 1 | |
| 19 | 110630003 | Screw | 1 | |
| 20 | 110600010 | Screw | 1 | |
| 21 | 110600008 | Lifter spring | 1 | |
| 22 | 110640001 | Collar | 2 | |
| 23 | S150202010 | Screw | 4 | |
| 24 | 110630001 | Lifter shaft | 1 | |
| 25 | 110650002 | Intermediate lever | 1 | |
| 26 | S150209049 | Screw | 1 | |
| 27 | S150620001 | Retaining ring | 2 | |
| 28 | 110650003 | Connecting pin | 2 | |
| 29 | 110650001 | Connecting plate | 1 | |
| 30 | 110650004 | Lifter lever(small) | 1 | |
| 31 | 022540004 | Screw | 1 | |
| 32 | 110681000 | Lifter lever | 1 | |
| 33 | 110680001 | Lifter lever stop | 1 | |
| 34 | S150202009 | Screw | 2 | |
| 35 | 110671000 | Tension release lever | 1 | |
| 36 | S150103007 | Screw | 1 | |
| 37 | 110660000 | Tension release shaft | 1 | |
| 38 | 110200034 | Swing-proof spring | 1 | |
| 39 | 110600012 | Finger guard | 1 | |
| 40 | S150299035 | Screw | 1 | |

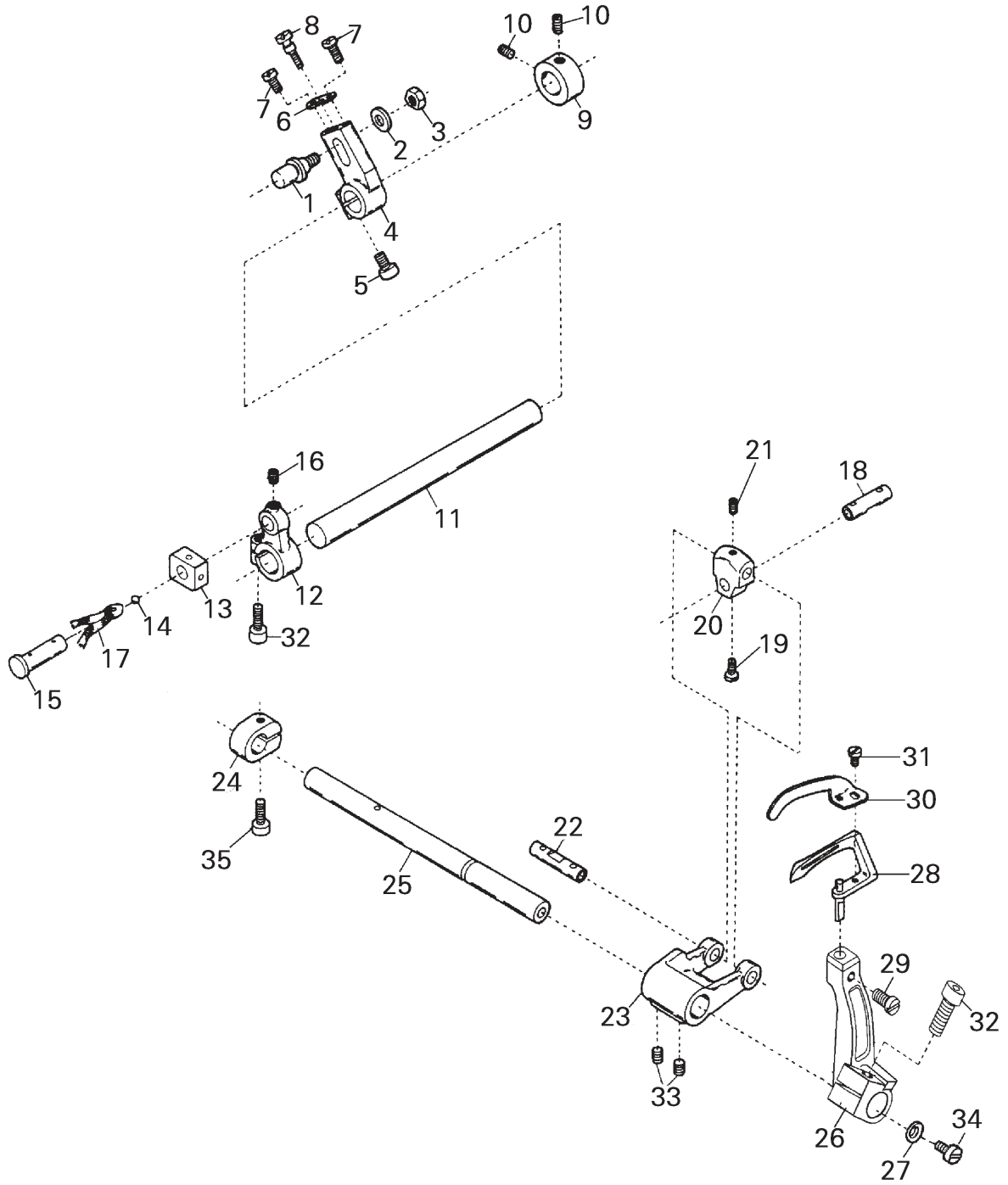
9. SPREADER MECHANISM



9. SPREADER MECHANISM

| No | Ret. No. | Description | Qt | Note |
|----|------------|-----------------------------|----|------|
| 1 | 1102A0000 | Connecting rod complete set | 1 | |
| 2 | 1102A0001 | Eccentric | 1 | |
| 3 | S150299028 | Screw | 2 | |
| 4 | S150801036 | Roller bearing | 1 | |
| 5 | 1102A0002 | Connecting rod | 1 | |
| 6 | S150617004 | Retaining ring | 1 | |
| 7 | S150299035 | Screw | 1 | |
| 8 | 1102A0004 | Washer | 1 | |
| 9 | 1102A0003 | Adjusting lever pin | 1 | |
| 10 | 1102A0006 | Washer | 1 | |
| 11 | S150503005 | Nut | 1 | |
| 12 | 028200026 | Collar | 1 | |
| 13 | 028100068 | Screw | 2 | |
| 14 | 1102A0005 | Adjusting lever | 1 | |
| 15 | S150299025 | Screw | 1 | |
| 16 | 110200010 | Driving shaft | 1 | |
| 17 | 1102B0001 | Rocking arm | 1 | |
| 18 | S150299029 | Screw | 2 | |
| 19 | 1102B0002 | Rocking pin | 1 | |
| 20 | 110200011 | Spreader bar | 1 | |
| 21 | 110200012 | Bushing ring | 1 | |
| 22 | 110400006 | Collar | 1 | |
| 23 | S150299027 | Screw | 2 | |
| 24 | 110200013 | Spreader holder | 1 | |
| 25 | 110200014 | Spreader | 1 | |
| 26 | S150299033 | Screw | 1 | |
| 27 | S150216013 | Screw | 1 | |

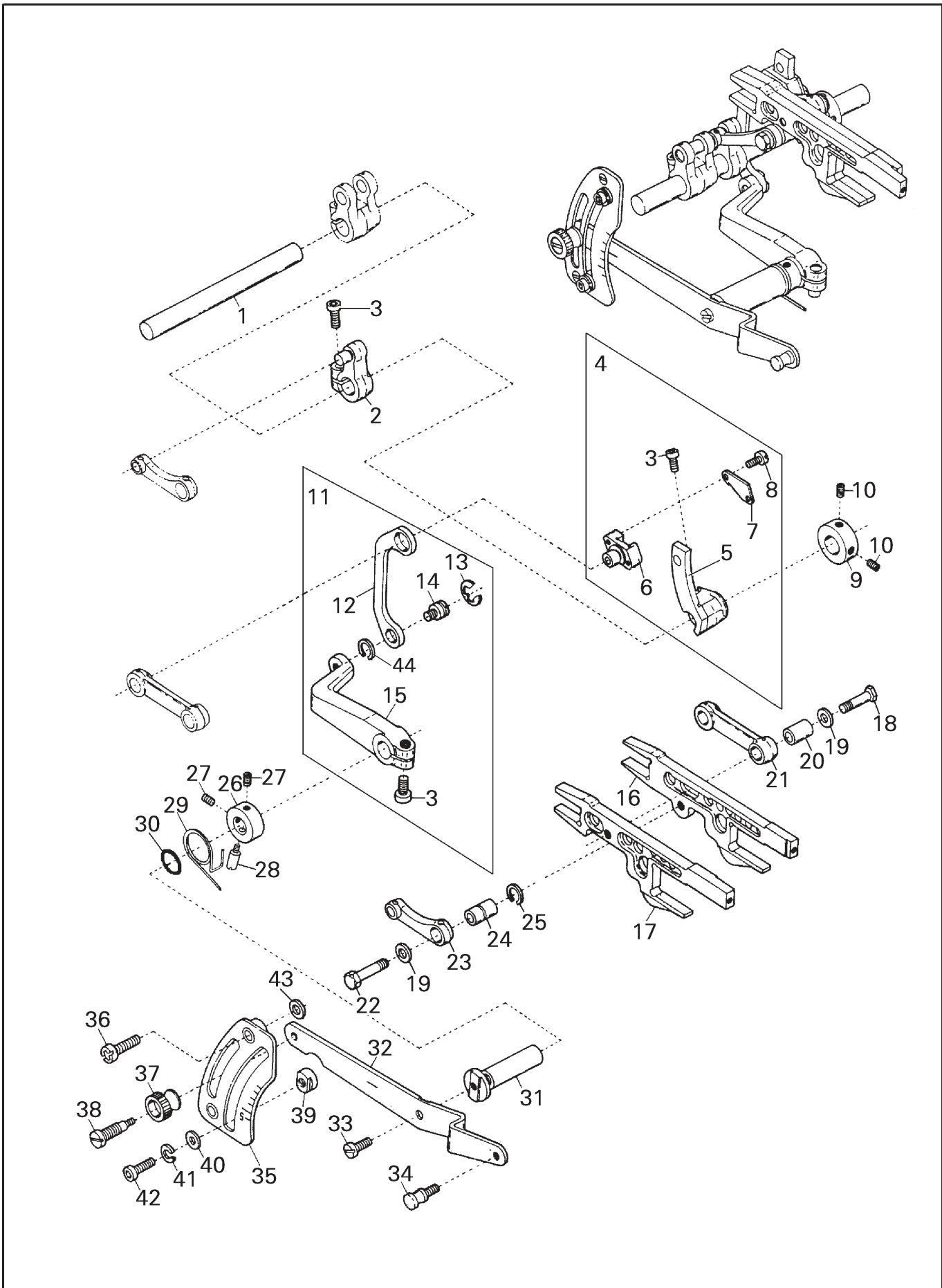
10. LOOPER DRIVING MECHANISM



10. LOOPER DRIVING MECHANISM

| No | Ret. No. | Description | Qt | Note |
|----|------------|-------------------------------------|----|----------|
| 1 | 110580004 | Adjusting screw | 1 | |
| 2 | 110580005 | Washer | 1 | |
| 3 | S150503004 | Nut | 1 | |
| 4 | 110580001 | Looper rocker lever | 1 | |
| 5 | S150209052 | Screw | 1 | |
| 6 | 110580002 | Looper rocker adjusting guide plate | 1 | |
| 7 | S150201004 | Screw | 2 | |
| 8 | 110580003 | Adjusting screw | 1 | |
| 9 | 110400006 | Collar | 1 | |
| 10 | S150299027 | Screw | 2 | |
| 11 | 110500015 | Looper rocker shaft | 1 | |
| 12 | 1105A0001 | Looper rocker arm | 1 | |
| 13 | 1105A0002 | Looper slide block | 1 | |
| 14 | 1105A1002 | Seal plug | 1 | |
| 15 | 1105A1001 | Looper slide block pin | 1 | |
| 16 | S150299028 | Screw | 1 | |
| 17 | 1105A1003 | Oil wick | 1 | |
| 18 | 1105C0004 | Link pin(short) | 1 | |
| 19 | 022100011 | Screw | 1 | |
| 20 | 1105C0002 | Looper driving lever link | 1 | |
| 21 | 1105C0005 | Screw | 1 | |
| 22 | 1105C0003 | Link pin(long) | 1 | |
| 23 | 1105C0001 | Looper driving lever | 1 | For 335 |
| | 110N00001 | Looper driving lever | 1 | For 335H |
| 24 | 1105B0001 | Collar | 1 | |
| 25 | 110500018 | Looper driving shaft | 1 | |
| 26 | 221200027 | Looper holder | 1 | |
| 27 | S150613005 | Washer | 1 | |
| 28 | 1105D0003 | Looper | 1 | |
| 29 | 1105D0005 | Screw | 1 | |
| 30 | 1105D0002 | Needle guard(front) | 1 | |
| 31 | S150202002 | Screw | 1 | |
| 32 | S150299002 | Screw | 2 | |
| 33 | S150299016 | Screw | 2 | |
| 34 | 221200028 | Screw | 1 | |
| 35 | S150299026 | Screw | 1 | |

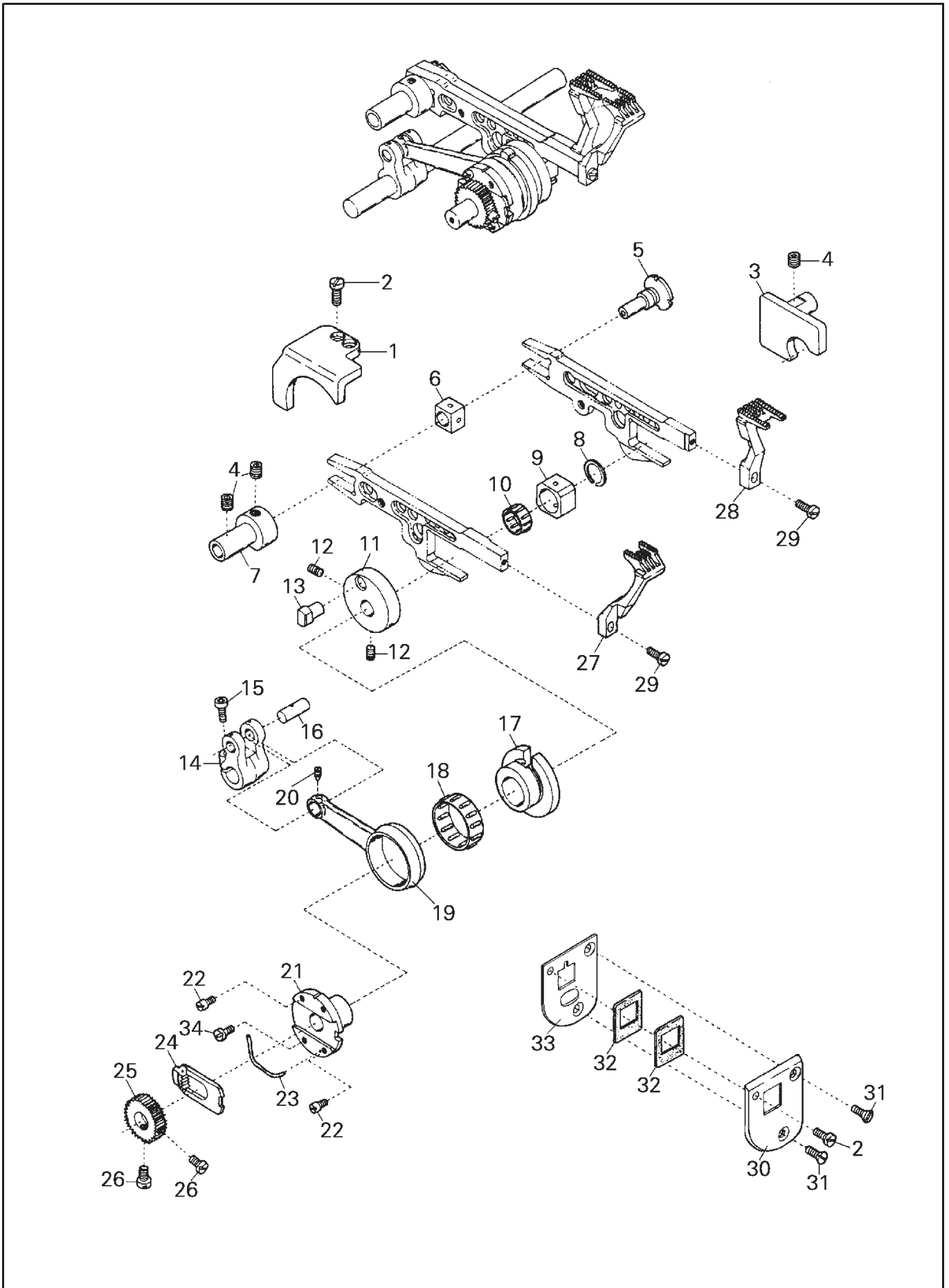
11. FEED DRIVING MECHANISM



11. FEED DRIVING MECHANISM

| No | Ret. No. | Description | Qt | Note |
|----|------------|------------------------------------|----|------|
| 1 | 110400002 | Feed bar driving shaft | 1 | |
| 2 | 110400005 | Main feed bar lever | 1 | |
| 3 | S150299024 | Screw | 3 | |
| 4 | 110420000 | Differential rocker complete | 1 | |
| 5 | 110420001 | Differential rocker | 1 | |
| 6 | 110420002 | Differential regulating slider | 1 | |
| 7 | 110420003 | Differential regulating slider cap | 1 | |
| 8 | S150299030 | Screw | 2 | |
| 9 | 110400006 | Collar | 1 | |
| 10 | S150299027 | Screw | 2 | |
| 11 | 110430000 | Differential lever (inner),C.set | 1 | |
| 12 | 110430001 | Slider link | 1 | |
| 13 | S150620005 | Retaining ring | 1 | |
| 14 | 110430003 | Slider link pin | 1 | |
| 15 | 110430002 | Differential lever (inner) | 1 | |
| 16 | 110440001 | Main feed bar | 1 | |
| 17 | 110440002 | Differential feed bar | 1 | |
| 18 | 110440003 | Screw | 1 | |
| 19 | 110440009 | Washer | 2 | |
| 20 | 110440004 | Connection bushing | 1 | |
| 21 | 110440005 | Differential feed bar connection | 1 | |
| 22 | 110440008 | Screw | 1 | |
| 23 | 110440006 | Main feed bar connection | 1 | |
| 24 | 110440007 | Connection bushing | 1 | |
| 25 | S150617005 | Retaining ring | 1 | |
| 26 | 110400006 | Collar | 1 | |
| 27 | S150299027 | Screw | 2 | |
| 28 | S150405017 | Roll pin | 1 | |
| 29 | 110450001 | Differential lever spring | 1 | |
| 30 | S150651002 | O – ring | 1 | |
| 31 | 110400009 | Differential lever shaft | 1 | |
| 32 | 110400010 | Differential lever (left) | 1 | |
| 33 | S150299035 | Screw | 1 | |
| 34 | 110400015 | Screw | 1 | |
| 35 | 110400012 | Differential feed graduation | 1 | |
| 36 | S150203005 | Screw | 2 | |
| 37 | 110400014 | Adjusting nut | 1 | |
| 38 | 110400011 | Adjusting screw | 1 | |
| 39 | 110400016 | Differential lever stop | 2 | |
| 40 | S150610003 | Washer | 2 | |
| 41 | S150602005 | Spring washer | 2 | |
| 42 | S150299035 | Screw | 2 | |
| 43 | 110400013 | Washer | 2 | |
| 44 | S150602006 | Spring washer 5 | 1 | |

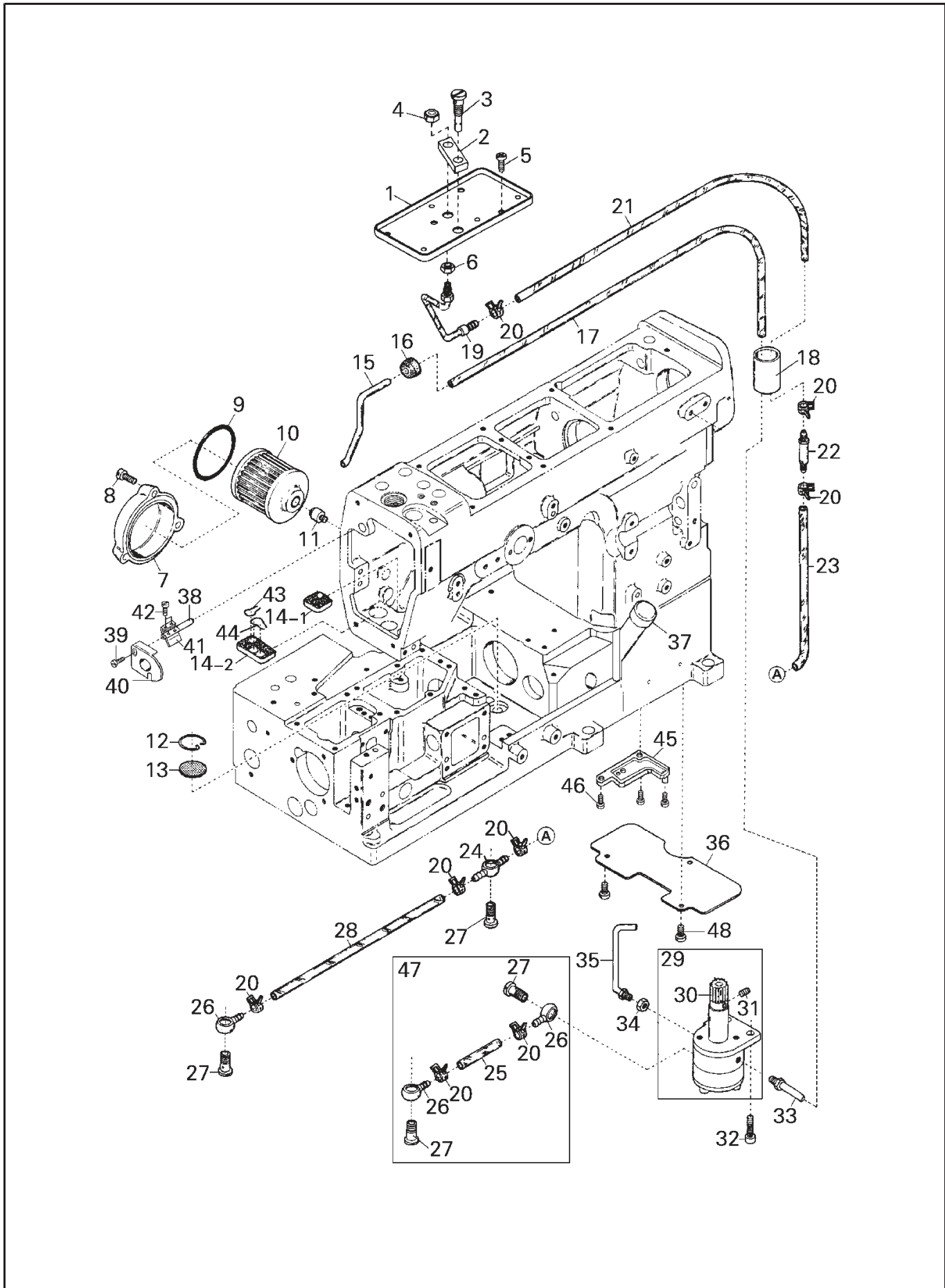
12. FEED DRIVING MECHANISM



12. FEED DRIVING MECHANISM

| No | Ret. No. | Description | Qt | Note |
|----|------------|-------------------------------------|----|------|
| 1 | 110400018 | Feed bar guide(left) | 1 | |
| 2 | S150202012 | Screw | 3 | |
| 3 | 110400019 | Feed bar guide(right) | 1 | |
| 4 | S150299029 | Screw | 3 | |
| 5 | 110400020 | Feed adjusting pin | 1 | |
| 6 | 110400021 | Feed bar block(rear) | 1 | |
| 7 | 110400022 | Feed bar guide(rear) | 1 | |
| 8 | 028400062 | Retaining ring | 1 | |
| 9 | 110400024 | Feed bar block(front) | 1 | |
| 10 | S150801030 | Roller bearing | 1 | |
| 11 | 110460001 | Eccentric pin holder | 1 | |
| 12 | S150299028 | Screw | 2 | |
| 13 | 110460002 | Feed dog eccentric pin | 1 | |
| 14 | 110460003 | Feed bar driving shaft lever | 1 | |
| 15 | S150299024 | Screw | 1 | |
| 16 | 110460004 | Connecting rod pin | 1 | |
| 17 | 110G00001 | Feed dog eccentric | 1 | |
| 18 | S150801037 | Roller bearing | 1 | |
| 19 | 110460006 | Feed dog driving connection rod | 1 | |
| 20 | S150299017 | Screw | 1 | |
| 21 | 110G00002 | Feed dog regulating eccentric | 1 | |
| 22 | 110460011 | Screw | 3 | |
| 23 | 110460008 | Feed dog regulating plate spring | 1 | |
| 24 | 110460009 | Feed dog regulating plate | 1 | |
| 25 | 110400040 | Feed dog regulating gear | 1 | |
| 26 | 110460012 | Screw | 2 | |
| 27 | 110G00005 | Differential feed dog (32,40,48,56) | 1 | |
| 28 | 110G00004 | Main feed dog (32,40,48,56) | 1 | |
| 29 | 028100027 | Screw | 2 | |
| 30 | 110400025 | Feed bar shield holder(front) | 1 | |
| 31 | S150203002 | Screw | 2 | |
| 32 | 110400026 | Feed bar shield | 2 | |
| 33 | 110400027 | Feed bar shield holder(rear) | 1 | |
| 34 | 110460013 | Screw | 1 | |

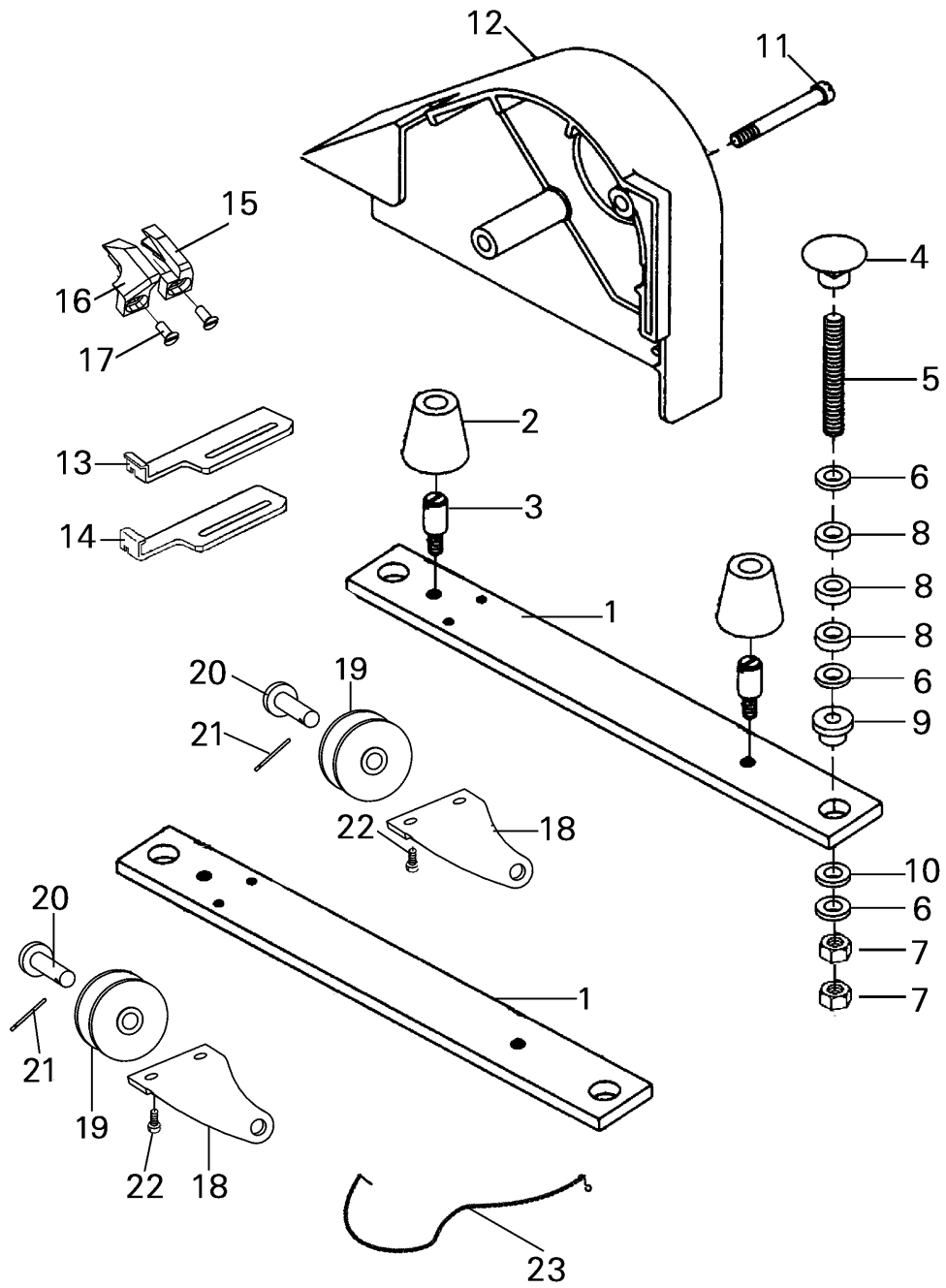
13. LUBRICATING MECHANISM



13. LUBRICATING MECHANISM

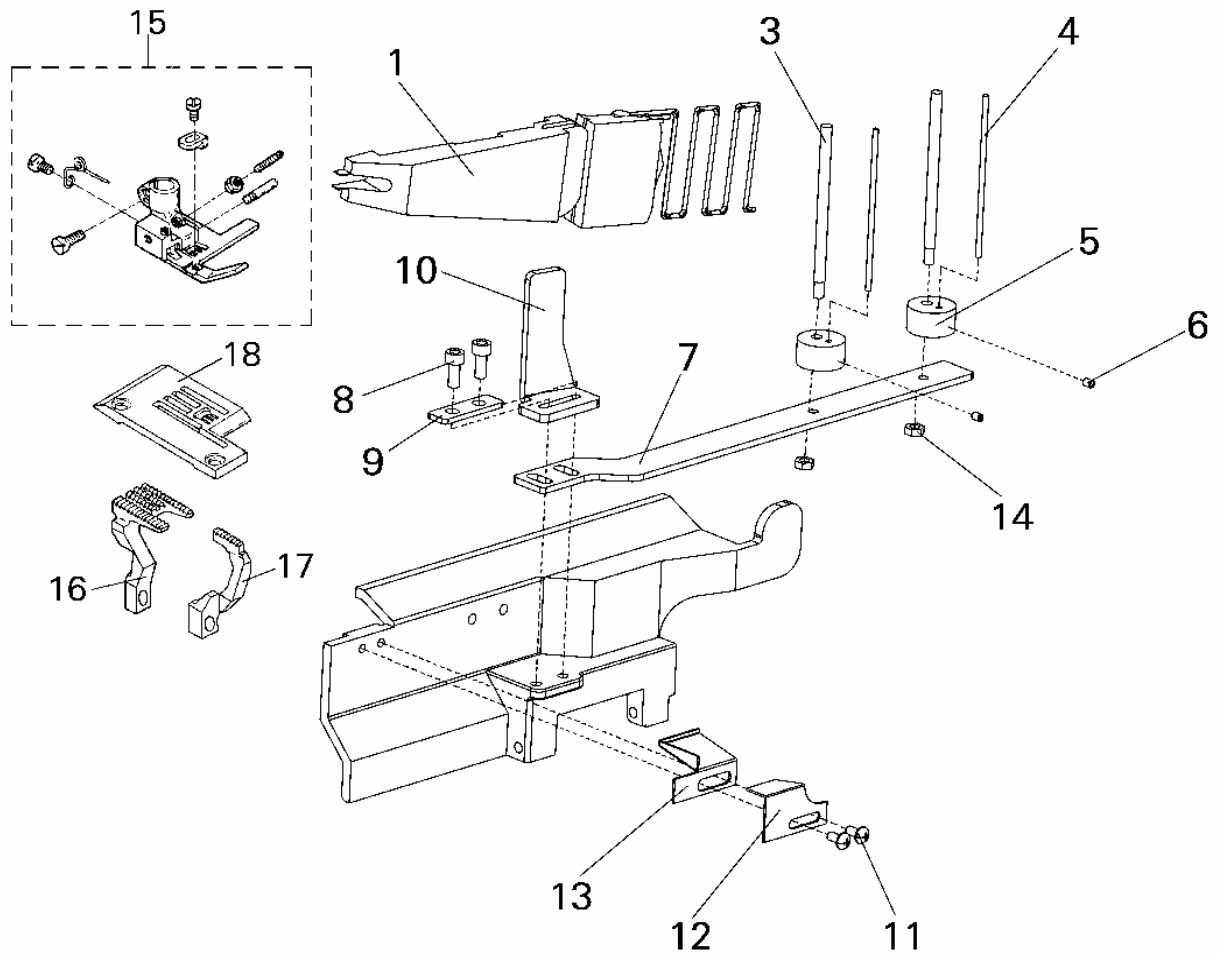
| No | Ret. No. | Description | Qt | Note |
|------|--------------|------------------------------|----|------|
| 1 | 110G10001 | Oil reservoir | 1 | |
| 2 | 110G10002 | Regulate oil block | 1 | |
| 3 | 221200029 | Regulate oil screw | 1 | |
| 4 | S150503005 | Nut | 1 | |
| 5 | S150216017 | Screw | 2 | |
| 6 | S150503004 | Nut | 1 | |
| 7 | 028700023--W | Oil filter cap | 1 | |
| 8 | S150299032 | Screw | 3 | |
| 9 | S150650003 | O-ring | 1 | |
| 10 | 028770001 | Oil filter | 1 | |
| 11 | 028700022 | Oil filter connector | 1 | |
| 12 | 110300006 | Oil filter screen clamp | 2 | |
| 13 | 110300005 | Oil filter screen | 2 | |
| 14-1 | 110300007 | Felt | 1 | |
| 14-2 | 110G00014 | Felt | 1 | |
| 15 | 110300010 | Suction pipe | 1 | |
| 16 | 110300011 | Suction pipe bushing | 1 | |
| 17 | 110300008 | Oil tube | 1 | |
| 18 | 110110003 | Draining pipe | 1 | |
| 19 | 110G20000 | Oil pipe unit | 1 | |
| 20 | 028700011 | Oil tube clamp | 8 | |
| 21 | 110300008 | Oil tube | 1 | |
| 22 | 110341000 | Non-return valve unit | 1 | |
| 23 | 110300008 | Oil tube | 1 | |
| 24 | 110340001 | Oil tube joint,two way | 1 | |
| 25 | 110300008 | Oil tube | 1 | |
| 26 | 028700010 | Oil tube joint,one way | 3 | |
| 27 | 028700012 | Fitting stub(short) | 4 | |
| 28 | 110300008 | Oil tube | 1 | |
| 29 | 110360000 | Oil pump complete set | 1 | |
| 30 | 110360001 | Oil pump driving worm gear | 1 | |
| 31 | S150207009 | Screw | 2 | |
| 32 | S150299024 | Screw | 2 | |
| 33 | 110362000 | Suction pipe | 1 | |
| 34 | S150503005 | Nut | 1 | |
| 35 | 110361000 | Oil nozzle for worm gear | 1 | |
| 36 | 110100018 | Dustproof plate | 1 | |
| 37 | 110300002 | Oil sight gauge | 1 | |
| 38 | 110G00011 | Oil pipe fixed bar | 1 | |
| 39 | S150216017 | Screw | 1 | |
| 40 | 110G00012 | Bed front plate | 1 | |
| 41 | 110G00013 | Bed right plate | 1 | |
| 42 | S150216017 | Screw | 2 | |
| 43 | 110G00015 | Felt clip (1) | 1 | |
| 44 | 110G00016 | Felt clip (2) | 1 | |
| 45 | 110300004 | Oil case | 1 | |
| 46 | S150299035 | Screw | 2 | |
| 47 | 110350000 | Oil pump, fittings (short) | 1 | |
| 48 | S150202009 | Screw | 3 | |

14. ACCESSORIES



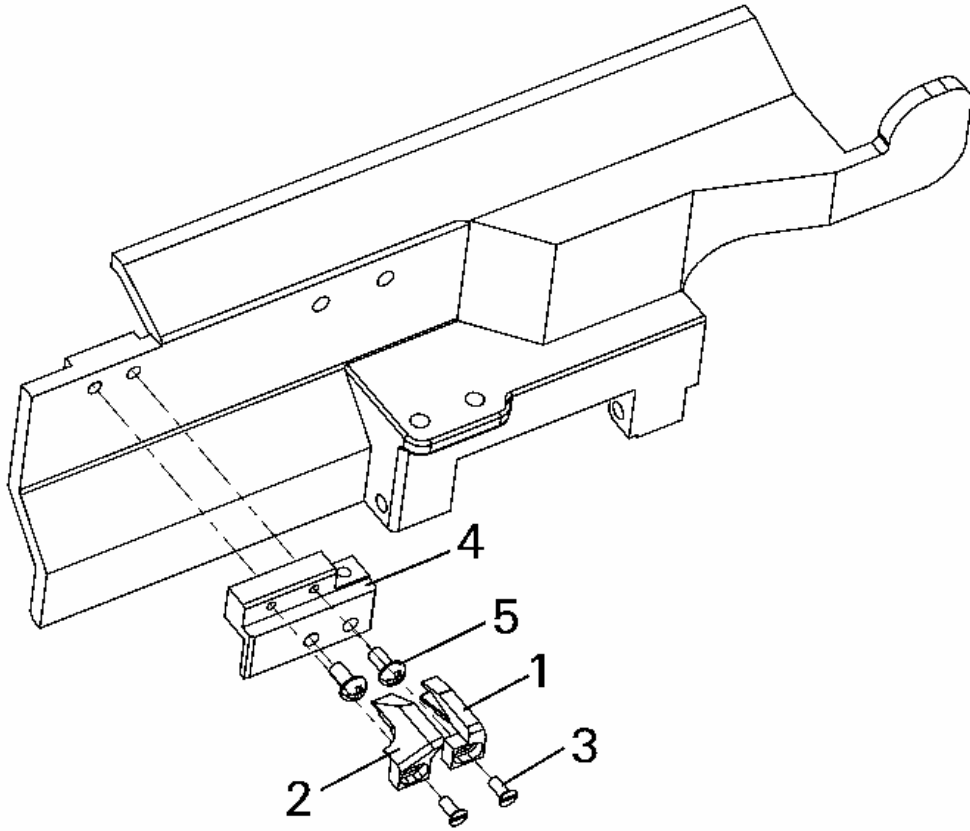
14. ACCESSORIES

| No | Ret. No. | Description | Qt | Note |
|----|------------|--|----|------|
| 1 | 110F10001 | Supporting board | 2 | |
| 2 | 110F10002 | Oil reservoir rubber cushion | 4 | |
| 3 | 110F10003 | Setting screw | 4 | |
| 4 | 110F10005 | Hanging nut | 4 | |
| 5 | 110F10004 | Hanging bolt | 4 | |
| 6 | S150607013 | Washer | 12 | |
| 7 | S150503007 | Nut | 8 | |
| 8 | 110F10006 | Spacer(see the table below) | 12 | |
| 9 | 110F10007 | Supporting board rubber cushion | 4 | |
| 10 | 110F10008 | Supporting board rubber cushion(lower) | 4 | |
| 11 | S150201001 | Screw | 2 | |
| 12 | 221F00013 | Belt cover | 1 | |
| 13 | 221F00008 | Upper folding device | 1 | |
| 14 | 221F00009 | Lower folding device | 1 | |
| 15 | 182100048 | R material guide | 1 | |
| 16 | 182100051 | L material guide | 1 | |
| 17 | S150202007 | Screw | 2 | |
| 18 | 221F00014 | Fixed plate | 2 | |
| 19 | 221F00015 | Roller | 2 | |
| 20 | 221F00016 | Pin | 2 | |
| 21 | S150401002 | Split pin | 2 | |
| 22 | S150209033 | Screws | 4 | |
| 23 | W060401052 | Chains 1050mm | 1 | |



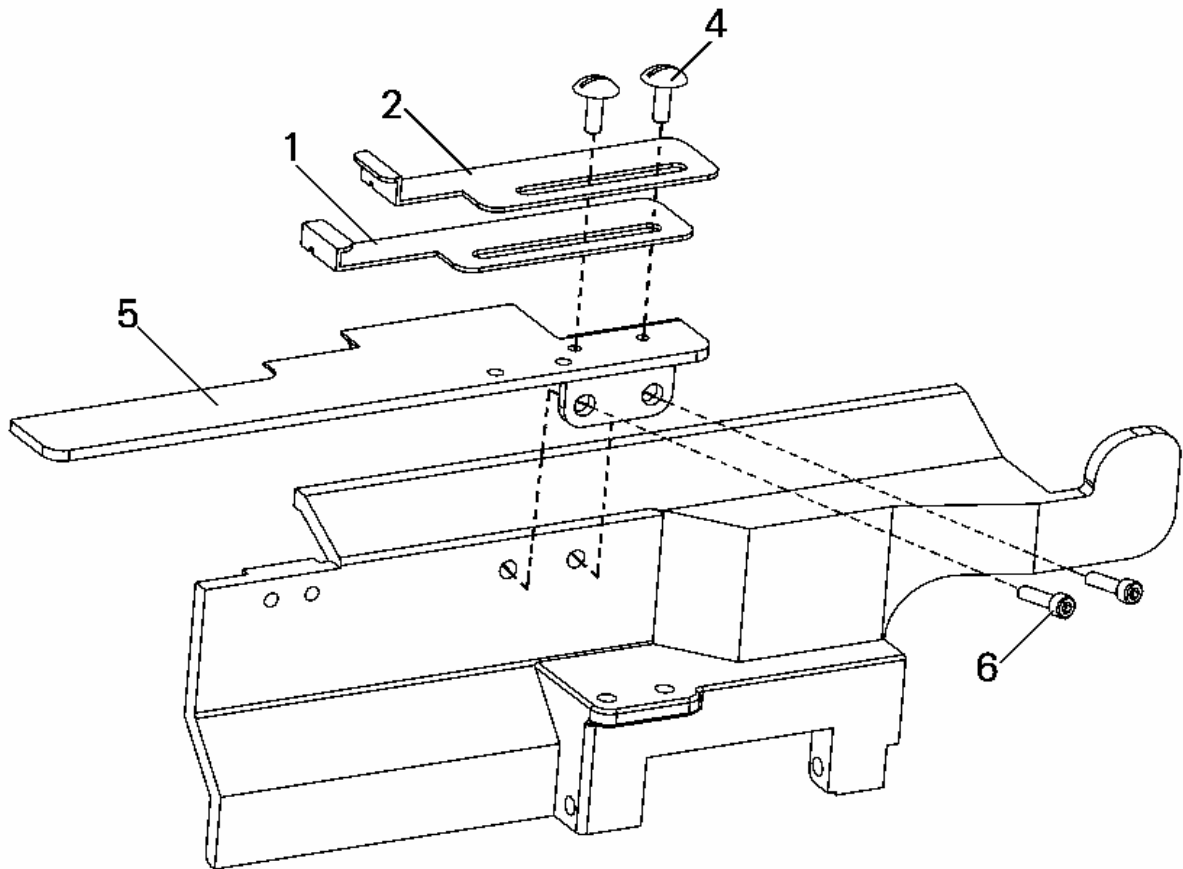
Collar Special-use parts for 335

| No | Ret. No. | Description | Qt | Note |
|----|------------|-----------------------------|----|------|
| 1 | 110A11000 | Binding | 1 | |
| 3 | 118110002 | Tape guide | 2 | |
| 4 | 118110004 | Tape guide (short) | 2 | |
| 5 | 118110003 | Tape guide adjusting holder | 2 | |
| 6 | S150299027 | Screw M4x4 | 2 | |
| 7 | 221F00012 | Binder plug | 1 | |
| 8 | S150220040 | Screw | 2 | |
| 9 | 110A00013 | Folder support fixing plate | 1 | |
| 10 | 110A00012 | Tape binding | 1 | |
| 11 | B62400812 | Screw | 2 | |
| 12 | 110150010 | Fabric slide plate | 1 | |
| 13 | 110150011 | Dust cover | 1 | |
| 14 | S150503017 | Nut M4 | 2 | |
| 15 | 110A41000 | Presser foot, complete set | 1 | |
| 16 | 110A00001 | Main feed dog | 1 | |
| 17 | 110A00002 | Differential feed dog | 1 | |
| 18 | 110A00003 | Needle clamp (5.6) | 1 | |



Seam Special—use parts for 335





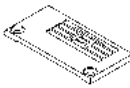



| No | Ret. No. | Description | Qt | Note |
|----|------------|---------------------|----|------|
| 1 | 182100048 | Material guide (R) | 1 | |
| 2 | 182100051 | Material guide (L) | 1 | |
| 3 | S150203001 | Screw M3X6 | 2 | |
| 4 | 221100042 | Material guide | 1 | |
| 5 | S150299035 | Screw M4x8 | 2 | |



Fold hem Special-use parts for 335

| No | Ret. No. | Description | Qt | Note |
|----|------------|----------------------|----|------|
| 1 | 221F00009 | Upper folding device | 1 | |
| 2 | 221F00008 | Lower folding device | 1 | |
| 4 | S150299035 | Screw M4X8 | 2 | |
| 5 | 221130004 | Front cover plate | 1 | |
| 6 | S150202016 | Screw M5X10 | 2 | |

335 SERIES GAUGE PARTS LIST

|  |  | |  |  |  |  |  |  |
|---|---|-----------------|---|---|---|---|---|---|
| TYPE | NO.OF NEEDLE | NEEDLE GAUGE | NEEDLE CLAMP | PRESSER FOOT | NEEDLE PLATE | FEED DOG | DIFFERENTIAL FEED DOG | LOOPER THREAD TAKE-UP COVER |
| GK335-1348 | 3 | 4.8 | 182610005 | 110693000 | 110400038 | 110G00004 | 110G00005 | 110170003 |
| GK335-1356 | 3 | 5.6 | 182610006 | 110691000 | 110400039 | 110G00004 | 110G00005 | 110170003 |
| GK335-1364 | 3 | 6.4 | 182610007 | 110692000 | 110G00003 | 110G00004 | 110G00005 | 110170003 |
| GK335-1460 | 4 | 6.0 | 182610008 | 182710018 | 182600026 | 110400031 | 110400032 | 110170003 |
| GK335-1348-11 | 3 | 4.8 | 182610005 | 110A43000 | 110A00005 | 110A00001 | 110A00002 | 110A30001 |
| GK335-1356-11 | 3 | 5.6 | 182610006 | 110A41000 | 110A00003 | 110A00001 | 110A00002 | 110A30001 |
| GK335-1364-11 | 3 | 6.4 | 182610007 | 110A42000 | 110A00004 | 110A00001 | 110A00002 | 110A30001 |
| GK335-1356-1 | 3 | 5.6 | 182610006 | 110E60000 | 110E00003 | 110E00005 | 110E00006 | 110E31001 |
| GK335-1364-1 | 3 | 6.4 | 182610007 | 110E90000 | 110E00004 | 110E00005 | 110E00006 | 110E31001 |

1.Introduction

Model 335 interlock stitch sewing machine is special equipment suitable for trades of knitwear, under-wear, etc. This series of products is capable of sewing many stitches, for example, plain interlock stitch, fell interlock stitch, collar and band binding stitch.

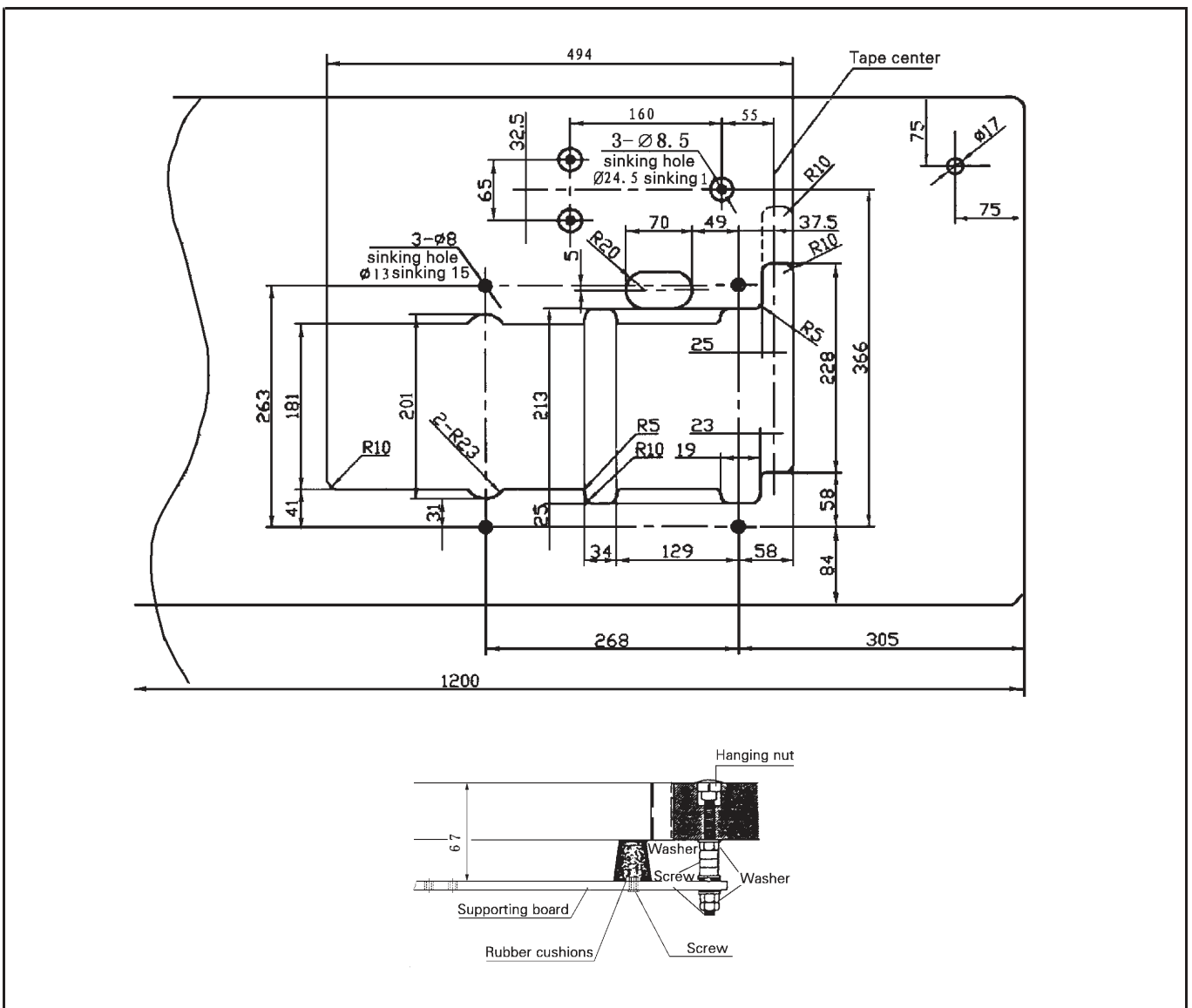
2.Specification

| Sewing speed | Gauge of needles | Needle bar stroke | Adjusting form of differential | Adjusting form of variational feeding | Differential ratio | Lubrication | Needle |
|--------------|------------------|-------------------|--------------------------------|---------------------------------------|--|------------------------------------|-------------------------|
| 6000 r/min | 1.4-4.5mm | 31 (mm) | Lever type | Button type | Max. positive ratio 1:2 Min. reverse ration 1:0.7 | With oil pump automatic oil supply | GK16 or UY1 28 DV×63 |

3.Installation

Referring to the illustration install the machine correctly.

Fix two pieces of supporting board and upper surface of table by increasing or decreasing nut washers.



4. Sewing Speed and Setting Up of Pulley

The highest sewing speed is 6500r.p.m. and ordinary one is 5300r.p.m.

However, it is preferable to operate the new machine at 4000r.p.m. in about 200 hours, after which at 4600r.p.m. ordinary speed. This manner will help life of machine to be much longer.

Turning direction of pulley (A) is clockwise as well as handwheel (B).

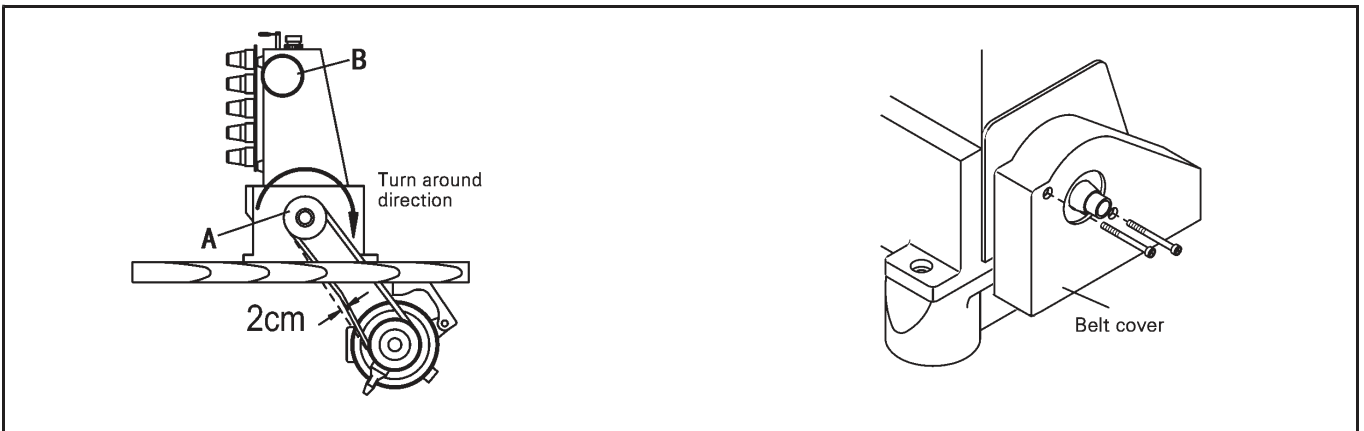
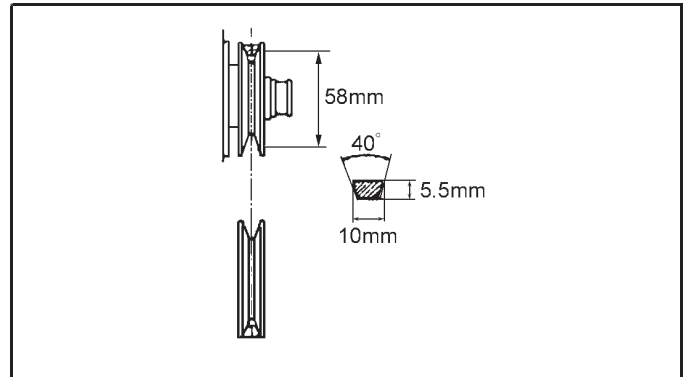
The transmission belt is V type, M series triangle belt.

After putting belt, please recheck the elasticity of belt, there should be 2CM elasticity when pressing the middle of belt lightly.

Pulley is shifted to left side while pedaling.

After fixing of motor in correct position, fit on belt guard cover.

| Dia of motor Pulley (d) | Sewing speed | |
|----------------------------|--------------|------------|
| | 50HZ | 60HZ |
| 80mm | 3600 r.p.m | 4320 r.p.m |
| 90mm | 4100 r.p.m | 5000r.p.m |
| 111mm | 5000 r.p.m | |



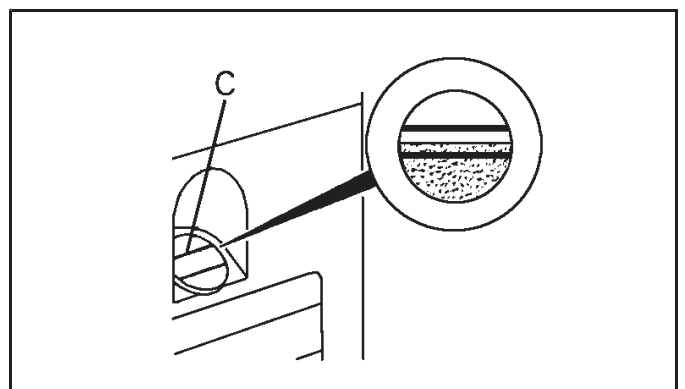
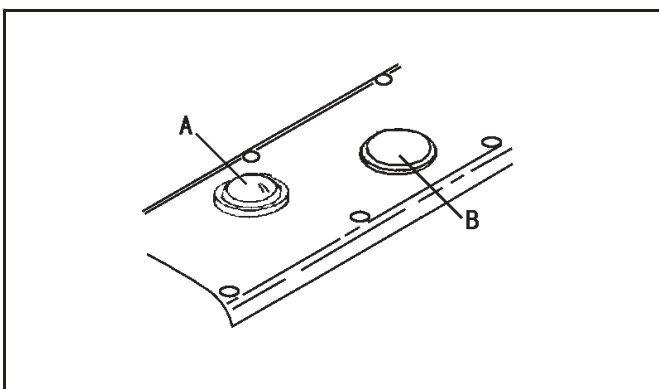
5. Lubrication

5-1 Oil to Be Used

Use sewing machine oil No.18

5-2 Feeding of Oil

Because oil will have been drained completely from machine at shipment, it must be filled in reservoir up to upper line of oil gauge (C).



5-3 Oil Sight Gauge and Check Procedure of Oil Cycling.

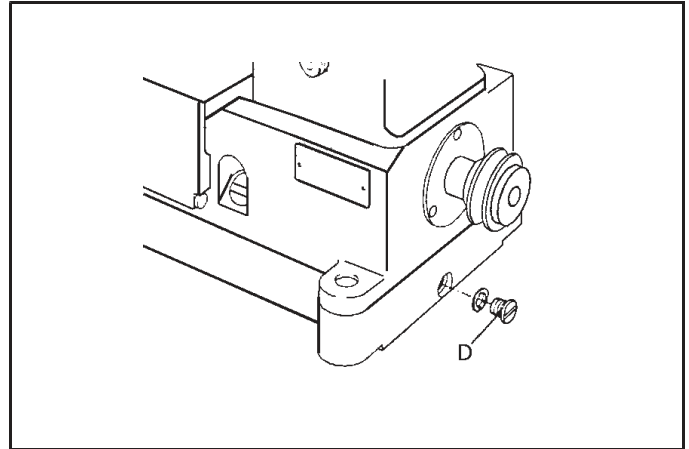
Check oil sight gauge everyday before operation and replenish oil if its face is below underline of the gauge. Looking through oil sight top nozzle before operation, observe the flowing of oil
Caution must be made that this regulating screw slot must be positioned between marks. Usually it has been adjusted properly before shipment.

5-4 Exchange of Oil

To keep the machine longer life, oil should be changed completely after the initial use around 200 hours, then change oil 2 or 3 times yearly.

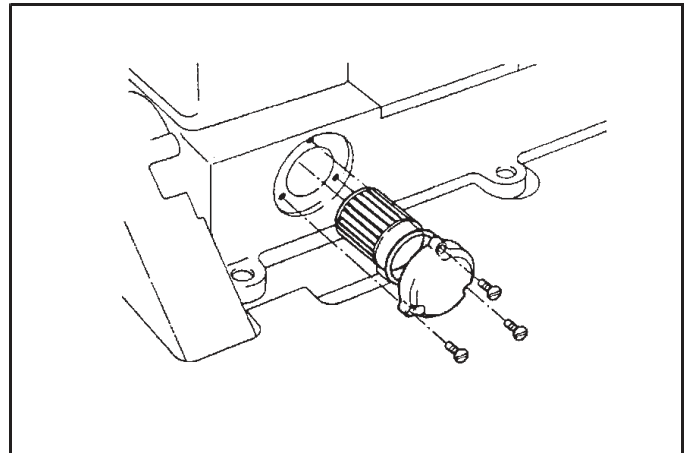
Change of oil shall be made according to the following order:

- a. Remove V belt from motor pulley, then remove machine head from supporting board.
- b. Remove belt guard.
- c. Remove drain screw (D) and drain oil.
- e. As for replenishment of oil, refer to "Feeding of Oil".



5-5 Cleaning of Filter and Screen.

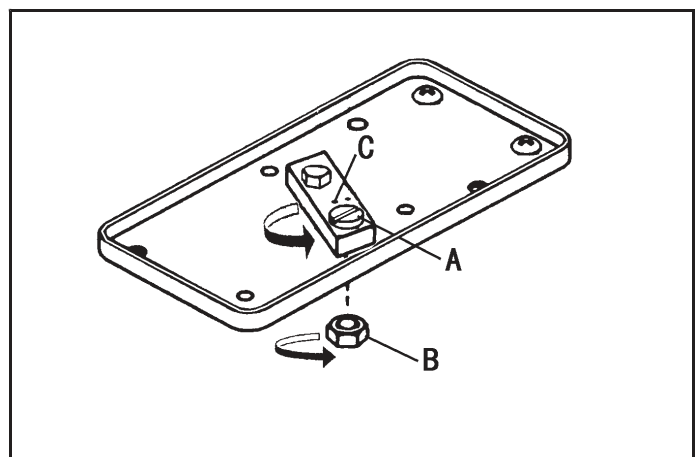
When the filter is blocked up, the oil supply will be affected. Although there is sufficient oil in oil reservoir, no oil could be spread from the nozzle. In the case, the operator should turn off the machine immediately, clean or exchange the filter. It should be cleaned every four months. As for the remove procedure of oil filter.



5-6 Oil amount adjustment

Open the faceplate, observe the oil baffle plate, it is normal when it drips between 5 seconds and 10 seconds, if it is not normal, please adjust the oil amount as below step:

1. Remove the top cover.
2. Release the nut B.
3. Adjust the direction of Screw A, when the slot of the screw A parallel with the point C, it is the max oil amount, and rotate the screw A in clockwise, until the oil amount is suitable, and lock the nut B.

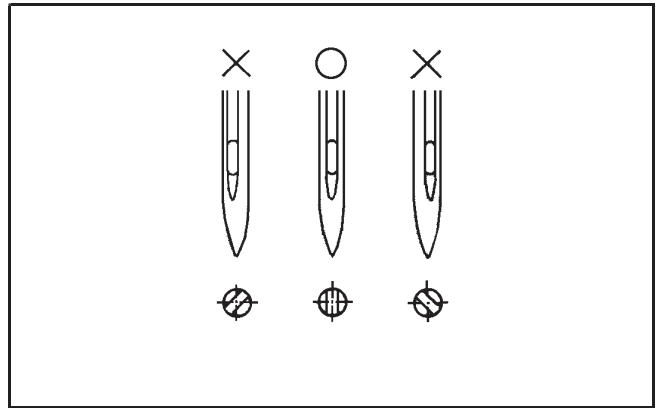


6. Proper Operation

6-1 Needle to Be Used, Fitting Of Needle and "SP" and "HR" Device.

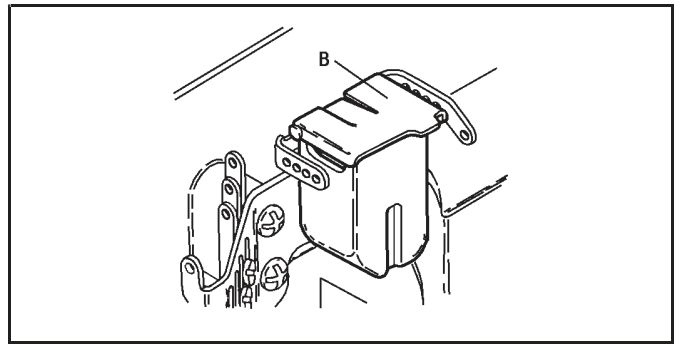
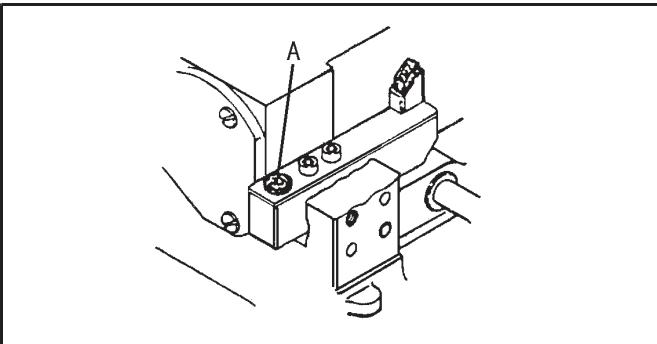
The machine uses needles of Model GK16, DVx63, B-63, or type of UY128 GAS. These are many sizes of needles, so that suitable size to the nature of sewing materials must be select. Generally, needle of #65 -90 is the standard size for lightweight, medium weight and medium heavy fabrics and #90 for heavy duty.

| | | | | | | |
|-------|----|----|----|----|----|----|
| DVx63 | 9 | 10 | 11 | 12 | 13 | 14 |
| B-63 | 65 | 70 | 75 | 80 | 85 | 90 |
| GK16 | | | | | | |



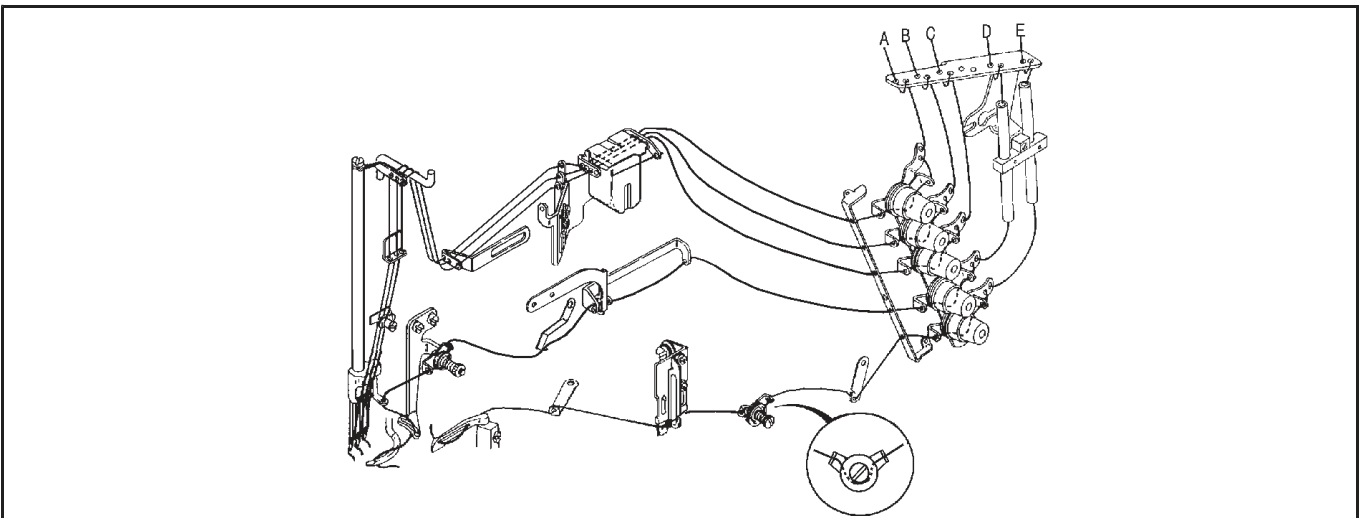
Needle should be set correctly facing their long slot towards operator; mark (X) in fig. 12 shows incorrect setting of needle. While operating machine in high speed, due to the friction occurred between needle and fabric causing stitch skipping, thread broken and the penetrated hole on the fabric will become much bigger, especially when compound thread and fabric are used.

To prevent from occurring above case, the machine is equipped device of needle lubrication. To achieve most efficient effect of these devices, silicon oil should be used. Generally, we suggest using these devices as much as possible and often open the covers of them, checking the oil amount and making feeding of silicon oil in time. If these devices are not necessary, it's better for you to take out felt from the devices and not let the needle tips and thread to touch them.



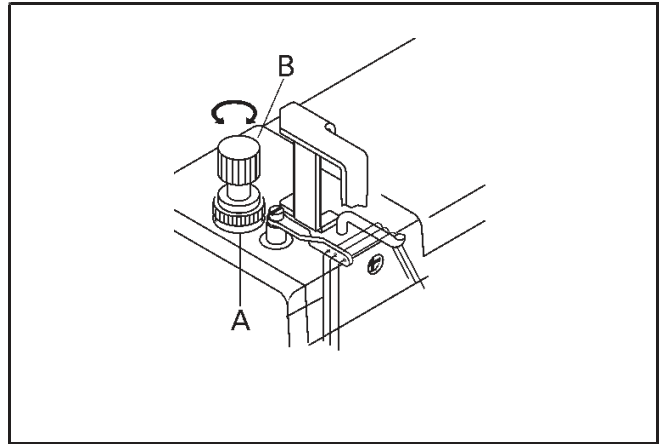
6-2 Threading

Threading the machine as shown in fig. A.B.C. indicate needle thread, D stand for upper ornamental thread, E presents looper thread.

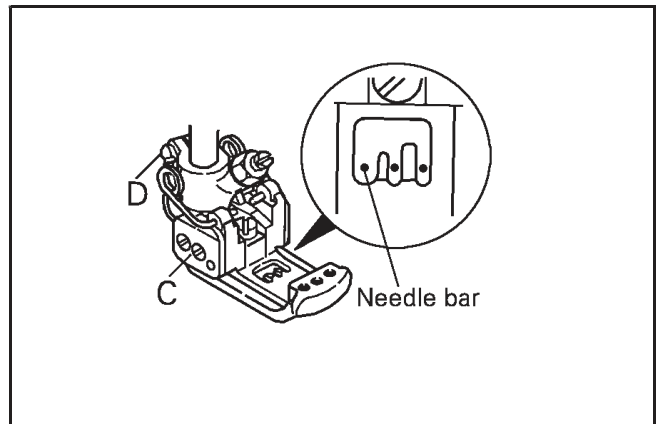


6-3 Pressure of Presser Foot and Its Adjustment

When pressure regulating screw (B) is turned clockwise, increase the pressure of presser foot; otherwise decrease it. Imperfect feeding or poor stitch will be caused if the pressure of presser foot is not set properly, so that, to keep the pressure of presser foot as weakly as possible under the condition that stitch is uniform.



If the needle doesn't drop into the center of dropping space as the illustration shows, it is necessary to make adjustment. Firstly, to loosen screw (D), and move presser foot (C), to assure the needle drop correctly. Then tighten screw (D) again.



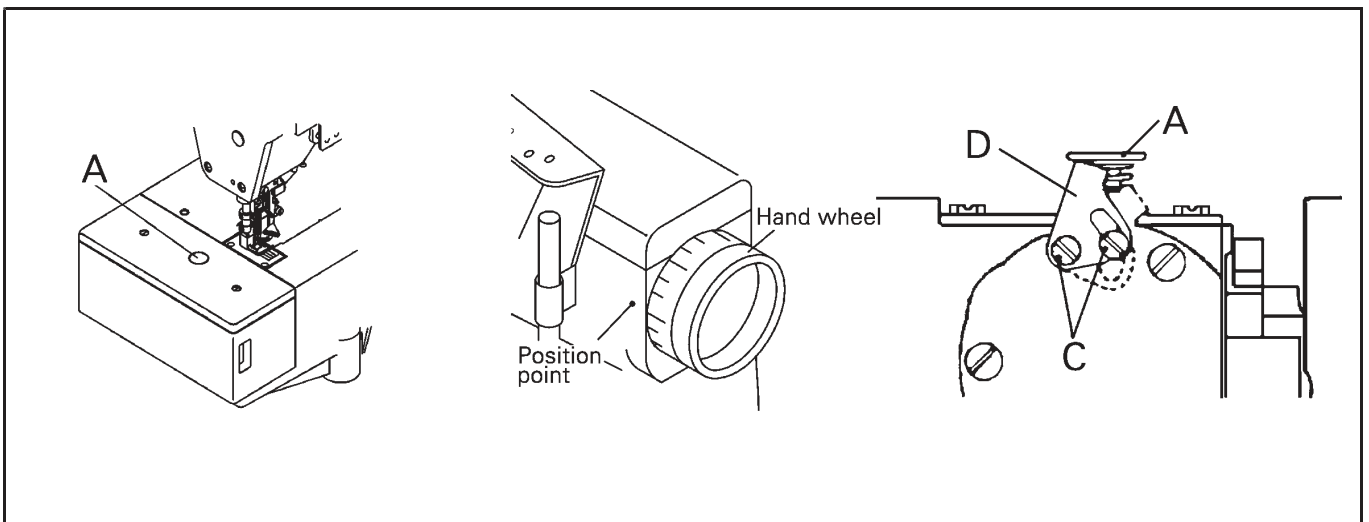
6-4 How to Change Stitch Length

(1) Switch off the Motor Power.

To change the stitch length, press pushbutton (A) softly by left hand until finger feels button top touch parts of machine inside, then turn handwheel by right hand until pushbutton falls in. At this moment, press the pushbutton more strongly and continue to turn handwheel.

(2) Graduation on the circumference of handwheel shows a stitch length in mm.

Turn handwheel by right hand and set any of graduation as desire, the more the graduation "L" close to the orientation-point on arm, the longer the stitch length will be, the more the graduation "S" close to orientation-point, the less stitch length will be the Max. Stitch length is 3.6mm and mium one is 1.4mm.



6-5 Adjusting of Differential Feeding

(1) Normal differential feeding

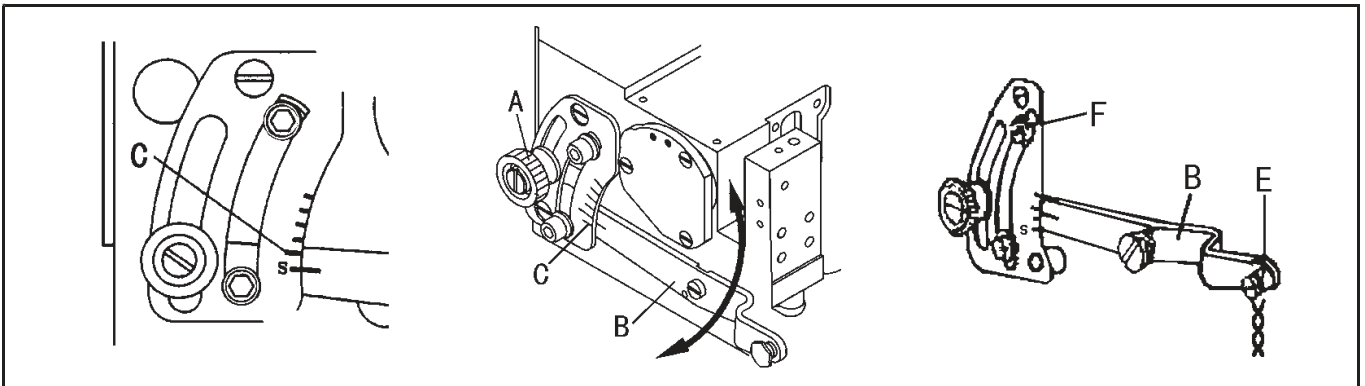
To make normal differential feeding, loosen screw (A), and set the link lever (B) up and down and fix it at proper position, then retighten screw (A).

When the countermark on the lever is aligned with long graduation line (C) on the graduation plate, main and differential feeding dogs will make equal movement as the ratio is in 1:1 in differential amount, normal differential amount will be increased with lever (B) raising, from "C" above, the ratio will be 1:1.25 1:1.5 1:1.75 and 1:2 successively.

(2) Reverse Differential Feeding When the lever is pressed down under the graduation "C", the machine will be in reverse differential feeding. If graduation "S" is aligned, the differential ratio will be 1:0.7.

(3) Adjusting of differential ratio during sewing

To make adjustment of differential ratio during sewing, the hanger chain can be linked with pedal. When the pedal is treaded after linkage, the differential ratio can be regulated at any time. After loosen screw (F), the range of random differential ratio can be adjusted.

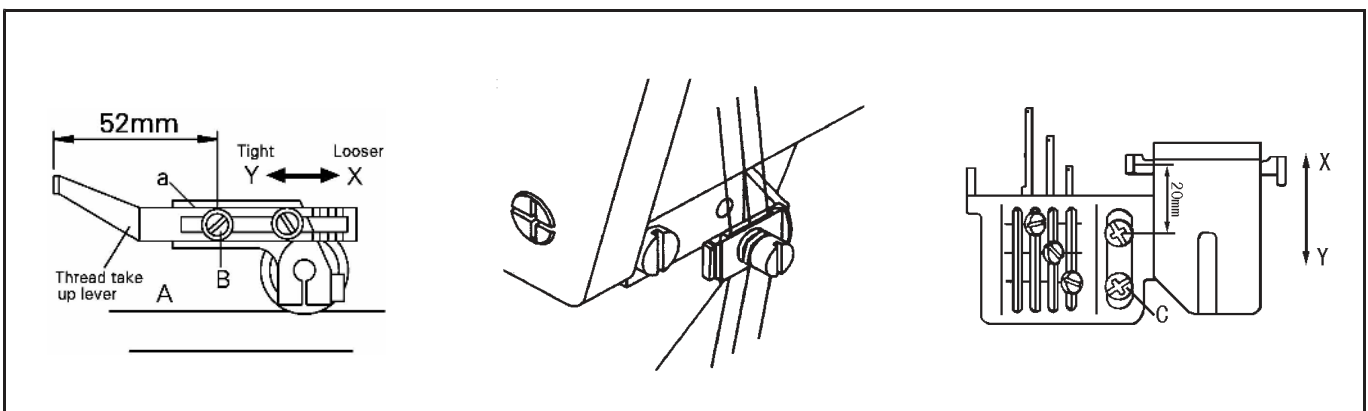


7. Proper Adjusting

Each setting is on the standard position of the machine and no need to be adjusted. Under certain special situation, like to change different needles and hooks, or make some inner adjustment to sew special

7-1 Tension of Needle thread

The distance between needle thread take-up (A) and center of fixing screw (B) is 52mm. When needle lever is at its highest position, edge (A) of needle thread take-up should be horizontal. This is the standard position of the needle thread take-up. After loosen screw (B), move the needle thread take-up towards (Y) direction, tighten needle thread; move it towards (X) direction, loose needle thread. If needle thread tension could not be regulated through above procedure. You'd better loosen screw (C), silicon oil device towards (Y) or (X) direction, and see if the tension is satisfied. Generally, move it towards (Y) direction, tighten the needle thread; move it towards (X) direction, loosen the needle thread.

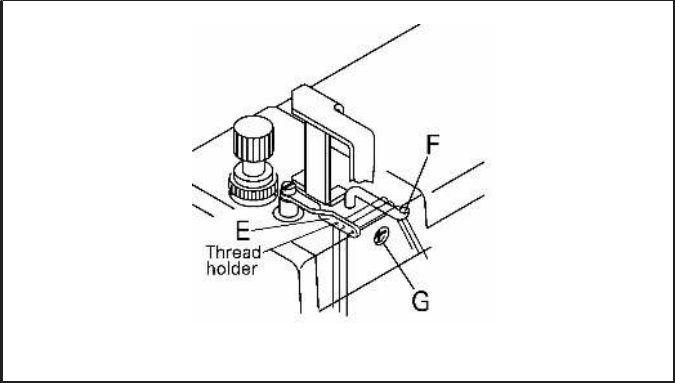


In case of general sewing condition, the distance between the center of screw and thread eyelet of thread guide should be 8mm.

Sometimes, owing to the different kind of thread nature, it is hard to form thread loop, causing skip of stitch; it's better for you to press the needle thread under small thread pressing plate. Sometimes, the thread loop of left needle is formed too big; it can also be pressed under the small pressing plate.

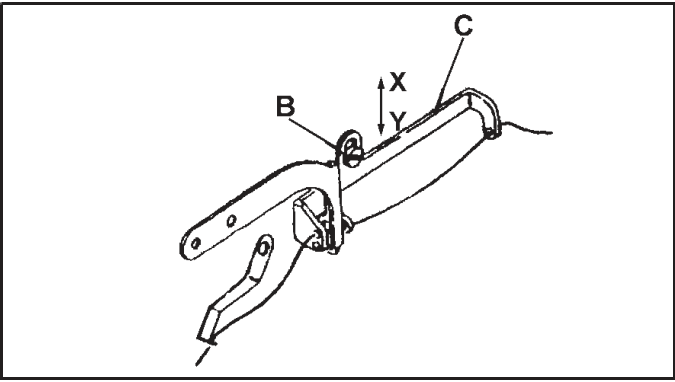
7-2 Adjusting of Needle Thread Retainer Device

In case of stretchable thread such as synthetic thread is used, needle thread loop will be unsteady, at this moment, loosen screw (G) and adjust device (F), To adjust the retainer device, when needle bar is at its lowest position, let the eye of eyelet (E) be even with the surface of thread retainer device (F).



7-3 Tension of Ornament Thread

To get plenty of ornamental running, lower the eyelet (C), by loosening screw (B) and otherwise to get little of thread running. Then, retighten the screw (B).

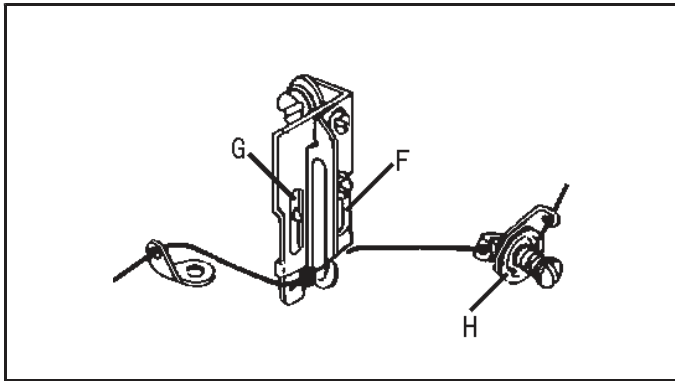
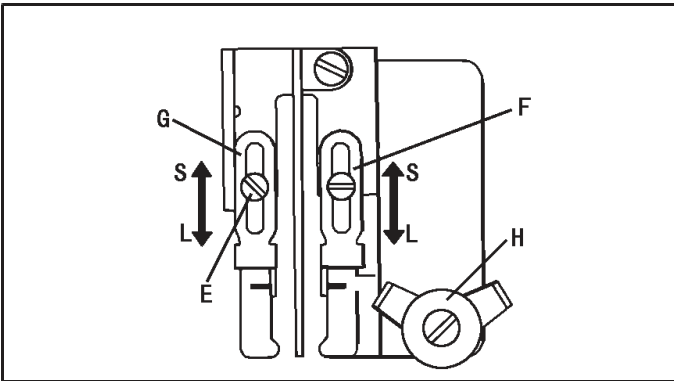


7-4 Adjusting of Tension of Loper Thread

The standard position is that the tighten screw (E) is in the middle of eyelet (F) and (G), and eyes of eyelet (F) and (G) must be aligned.

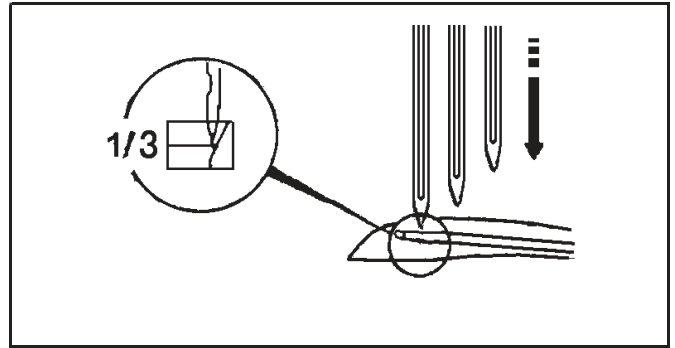
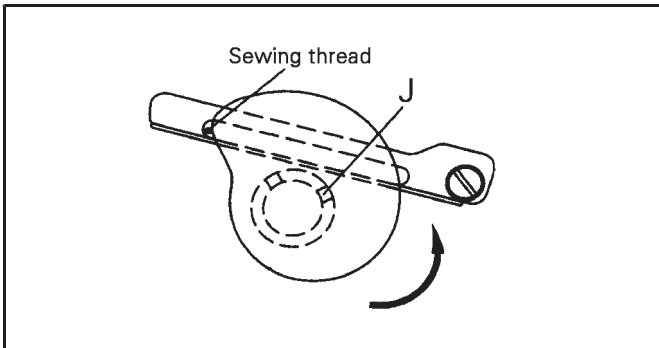
To get plenty of casting thread, loosen fixing screw of eyelets (F) and (G) move them towards direction (L), otherwise move them towards direction (S) and retighten the fixing screws in time.

Please pay attention to that, too much plenty of casting thread will cause skip of stitch. In case of wolly thread used, thread eyelet (F) and (G) must be set fully towards direction (L) and thread should not be pressed under small thread pressing plate (H).



7-5 Positioning of Loper Thread Take-up

Lower the needle bar from the highest position by turning handwheel. When the needle bar is at the half position of looper, let the looper thread cast off from the top of looper take-up cam (I), for chemical fiber. (The needle bar should be put the bottom of looper for the cotton thread. And the needle bar should be at the one third of looper for the woolen thread.) Then retighten screw (J).



7-6 Removal and Fitting of Presser Foot

To remove presser foot:

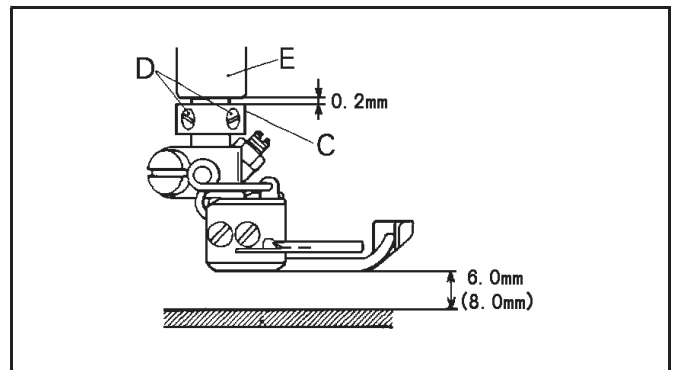
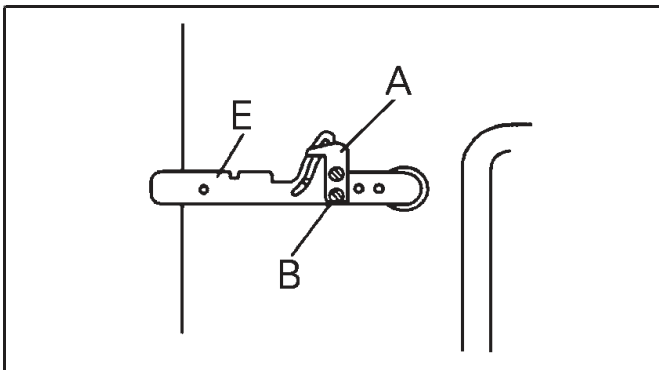
- Loosen regulating screw (B) and fixing screw (D) of foot stopper collar(C).
- Push the presser foot lever (E) towards, then presser foot can be removed.

To fit presser foot :

- Keep a distance of 6mm between bottom face of presser foot and top of needle plate. Then fix the press foot and retighten presser foot stopper collar(C) as show in the fig.
- Reading stopper plate (A) and retighten the screw (B).

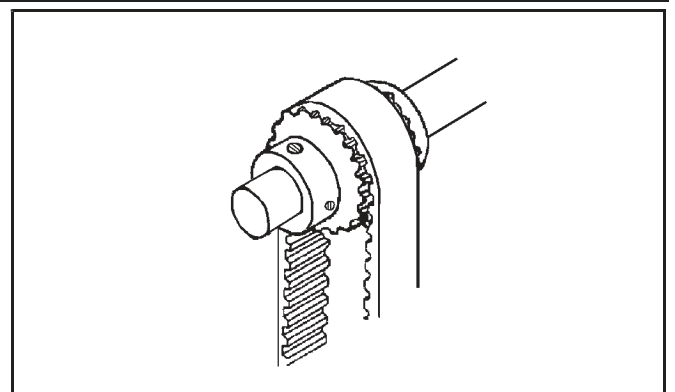
NOTE: The raising amount of presser foot of machines without ornamental thread looper is about 8mm.

And it is not necessary to use the stopper collar.



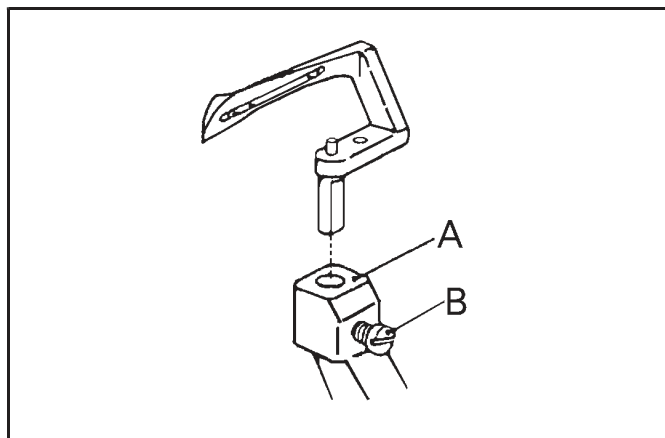
7-7 Timing of Needle with Loper Moving Right/Left

When needle bar is going up, looper must to left from its right end. When the looper begins to move towards left, needle must be going up. This timing of needle with looper moving right or left and this timing can be gained by regulating timing belt wheel.



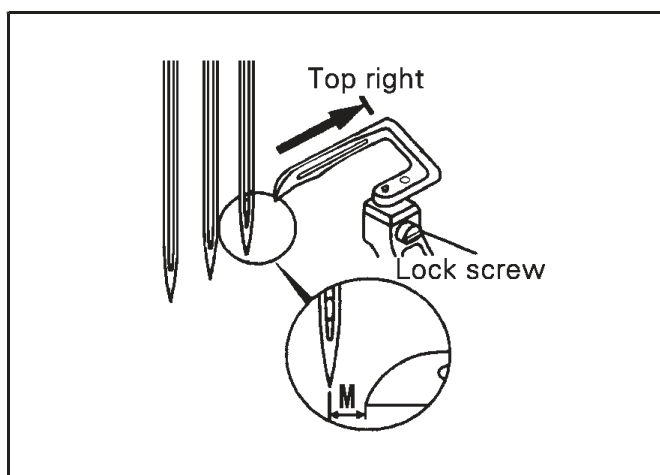
7-8 Fitting Angle and Height of Loper

Insert looper into looper holder as far as it will go and tighten screw (B), meanwhile, fitting angle (3°) will be decided naturally.



7-9 Distance (M) between Needle and Loper at Its Right End

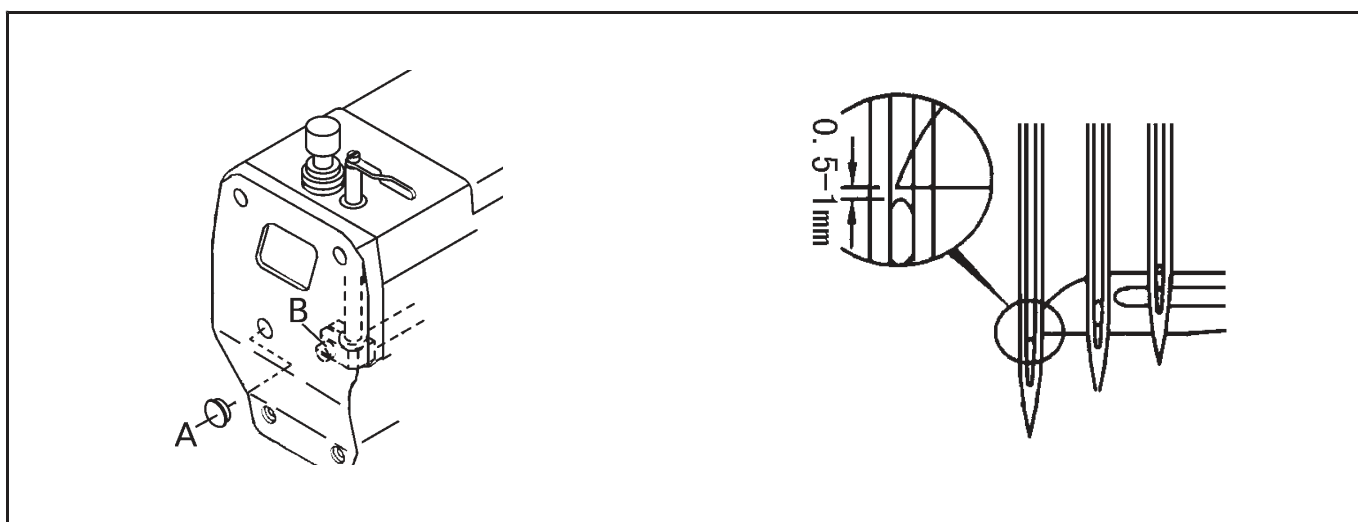
When needle are at their lowest position and looper is at its right end, distance (M) between center of right needle and point of looper shall be $M = 6 - A/2$, for 2-needle or 3-needle machine which the two sides distance of needle is A, for example, $A = 5.6$, $M = 3.2$.



7-10 Height of Needle

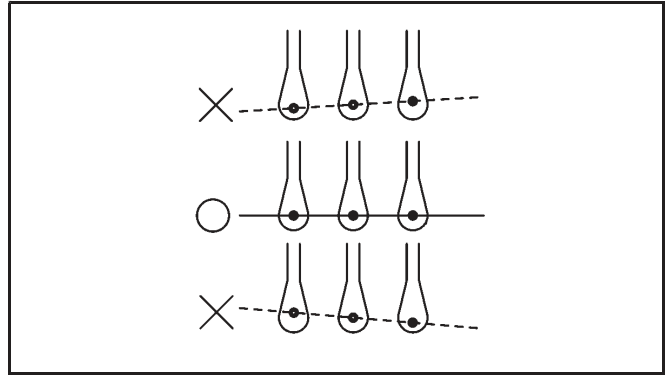
With special threads, please make adjustment as per below methods.

To adjust the height of needle bar, to open rubber plug A, and loose screw B. When needle point of looper move to the center of left needle, this needle point should be located 0.5-1mm above the needle



7-11 Relation between Needle and Stitch Plate

When the height of needle bar is set, needles must correctly formed in line as show in the illustration (solid line).



7-12 Relative Positioning of Needle and Loper in Front/Rear

a. As for three needle machine

When looper tip swings to the relative position of left needle, a clearance of 0.2–0.3mm must be kept.

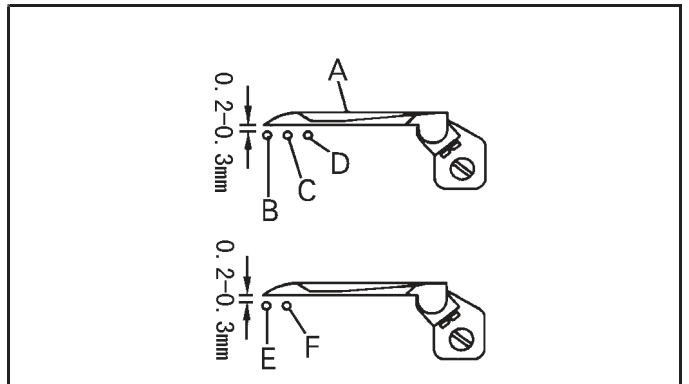
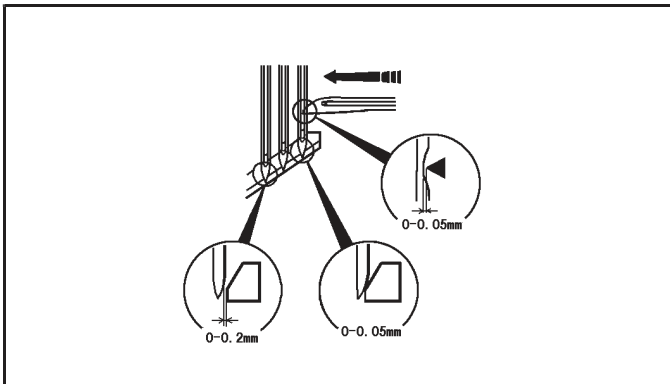
When it swings to at the relative opposition of middle needle, a clearance of 0.05–0.1mm must be kept.

When looper tip is at the opposition of right needle, there will appear a soft touch. It is necessary to push the needle a little forward (0.1–0.2mm) through needle guard (rear) let it keep a clearance of 0–0.05mm.

b. As for two-needle machine

When looper tip swing to the left needle, the clear-ance will be 0.2–0.3.

When looper tip swing to the right needle, there will be appear a soft touch, it is necessary to push the needle a little forward (0.1–0.2), let it keep a clearance of 0–0.05mm.



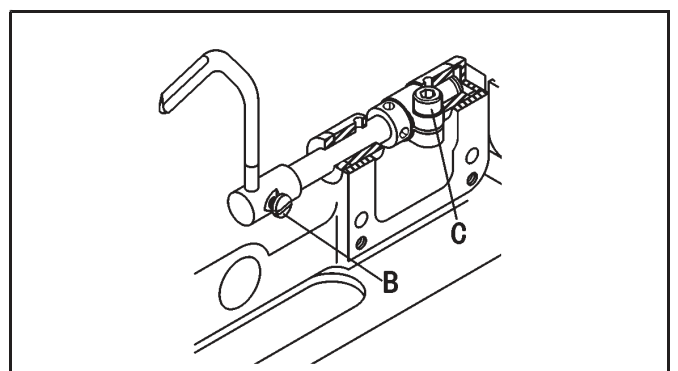
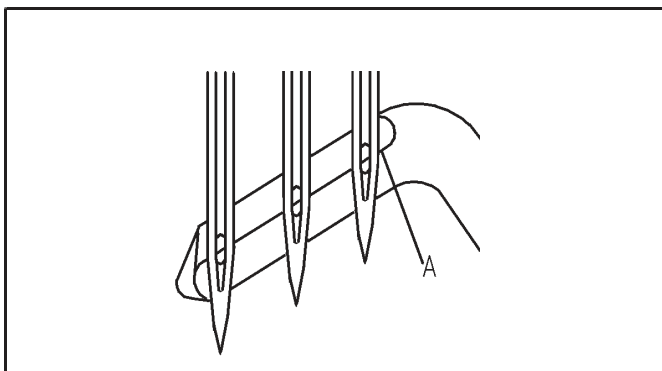
7-13 Adjusting of Needle Guard (rear)

a. Height of needle guard (rear)

To adjust the edge (A) of needle guard (rear) to be even with the center of needle eye.

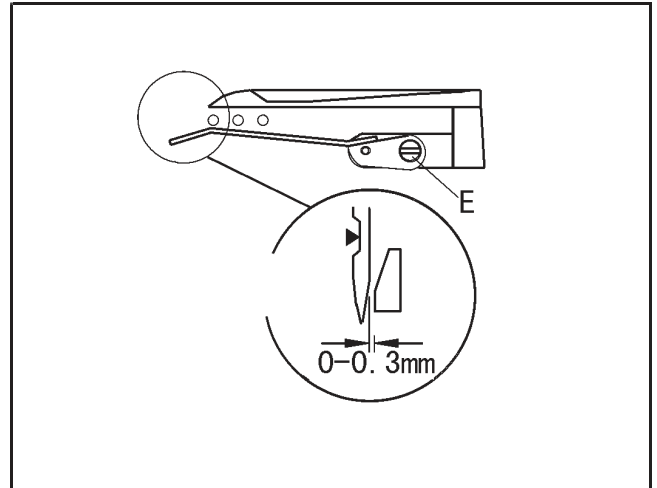
b. The correct positioning of needle guard(rear) should be as follows.

When looper tip swings to the right needle, it will push the right-needle a forward, and keep a clearance of 0–0.5mm between them. And a same clearance between the needle guard (rear) and left needle



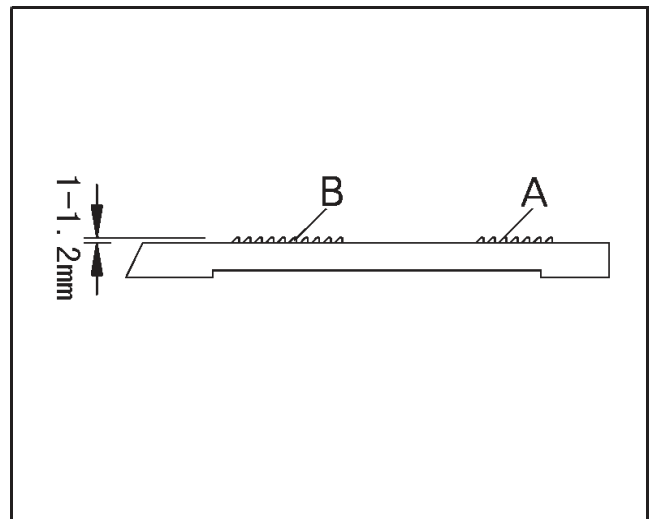
7-14 Adjusting of Needle Guard (front)

When needle guard (front) swing to the left needle, to loosen the screw (E), let the needle guard (front) keep a clearance of 0-0.3mm with left needle.



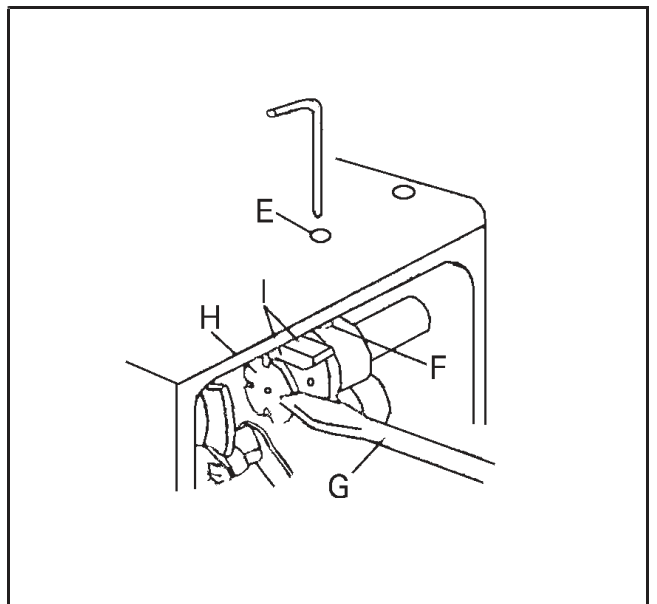
7-15 Height of Feeding Dogs

When feeding dogs move to its highest, the surface of feeding dogs tooth should be paralleled to the top face of stitch plate and main feeding dog (B) and differential feeding dog (A) should be at the same height of 1-1.2mm.



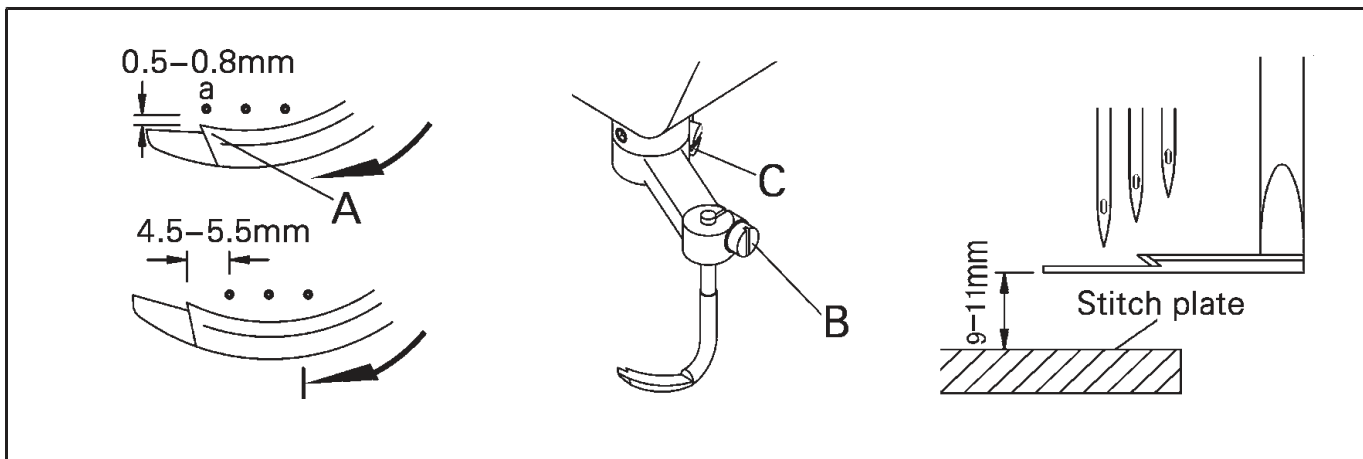
7-16 Parallel of Feeding Dog and Stitch Plate

Remove cloth plate (small) and rear cover, then to loosen the screw (F) with a screw driver passing through hole (E) of machine body and insert a screw driver into eccentric pin (H) to turn the eccentric pin and make the feeding dog and stitch plate parallel as re-quired.



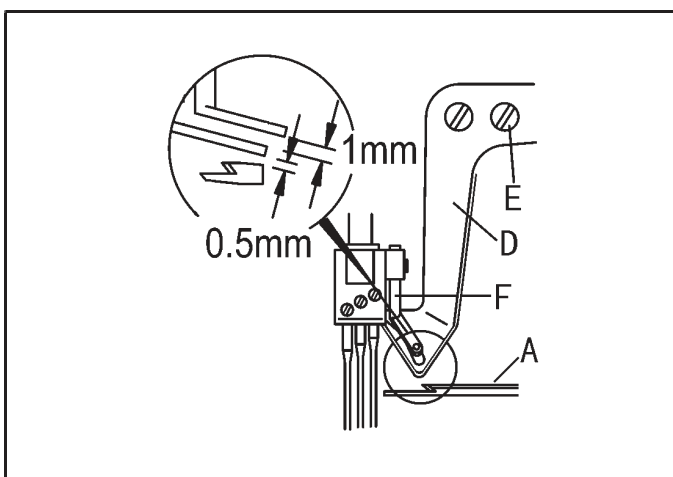
7-17 Fitting of Ornamental Looper and Its Adjusting

- When ornamental looper (A) move towards left, there should keep a clearance of 0.5–0.8mm between the hook point (a) and left needle. When it goes on moving to the left end above-mentioned clearance should be 4.5–5.5mm. All these adjustment can be made through the screw (C).
- There should keep a clearance of 9–11mm between the bottom of ornamental looper (A) and top face of stitch plate, and it can be adjusted with screw (B).



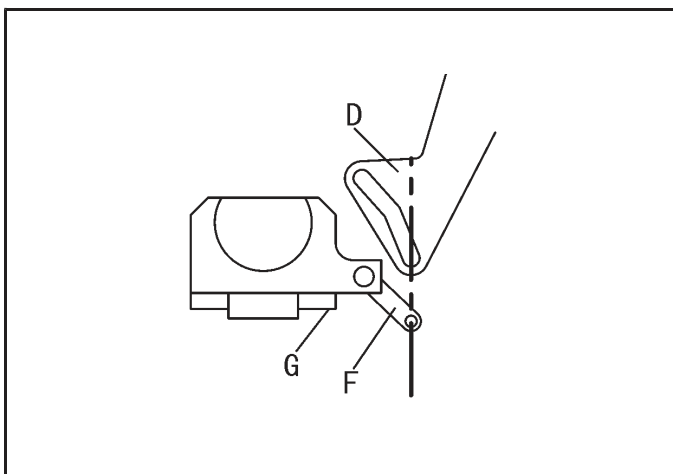
7-18 Adjusting of Ornamental Thread Eyelet

On the basis of top face of looper, to adjust ornamental thread eyelet, keep a clearance of 0.5mm between ornamental thread eyelet (D) bottom and top face of looper, confirm that there is no friction and hitting during sewing, then retighten fixing screw (E).



7-19 Adjusting of Small Ornament Thread Eyelet (F)

When the needle bar drops to its lowest, to adjust the clearance between small ornamental thread eyelet bottom and top face of ornamental thread eyelet D to about 1mm, and fit the small ornamental thread eyelet eye to the extension of long eye of ornamental thread eyelet.

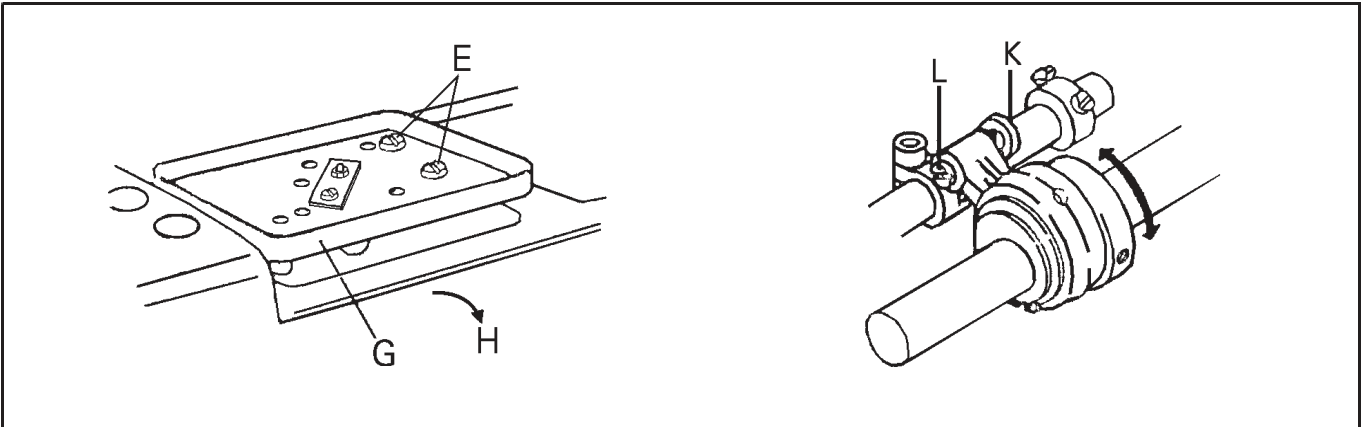


7-20 Adjusting of Swing Scope of Ornamental Loooper

In ordinary case, the swing scope of ornamental looper is set proper before shipment. But sometimes, owing to different sewing fabric or process requirement it is necessary to make readjustment as follows:

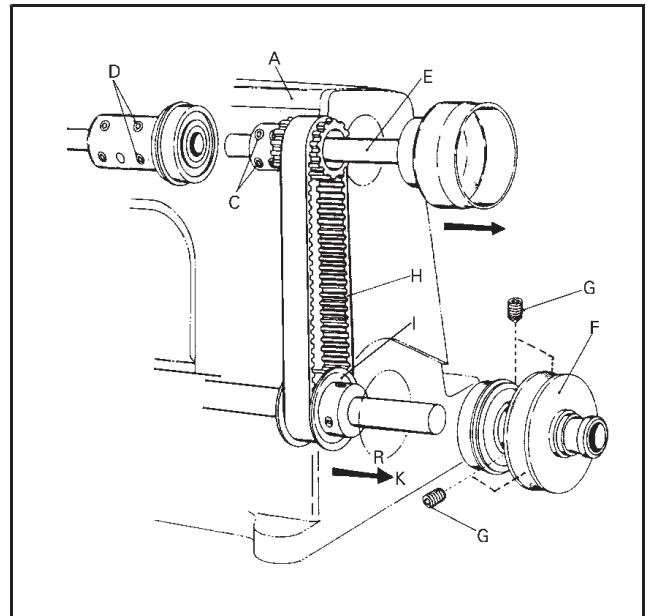
- Remove top cover.
- Remove screw (F) and move the oil reservoir out towards (H).
- Loosen nut (K); otherwise, to move the screw (L) down, to increase swing scope, then retighten the nut (K); otherwise, to move the screw (L) up.

NOTE: During adjustment, care must be taken not to keep too big amount of swing scope, otherwise will cause the ornamental thread too loose and stitch loose and uneven.



7-21 Exchange of Upper Shaft Belt

- Remove top cover(A)
- After loosening screw (D), pull out upper shaft(E) while holding handwheel; pull upper shaft driving belt out of main shaft sprocket and as well as to remove the upper shaft from the machine.
- Loosen screw (G) on belt wheel and remove the belt wheel.
- Pull belt toward direction (K) out of the hole (R) of machine.
- To set new upper shaft driving belt, make assembling by the order of d-c-b-a in the opposite of above-mentioned. After setting, adjust the timing between looper and needle.
- After adjusting, tighten screw (D) of pulley steadily.





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