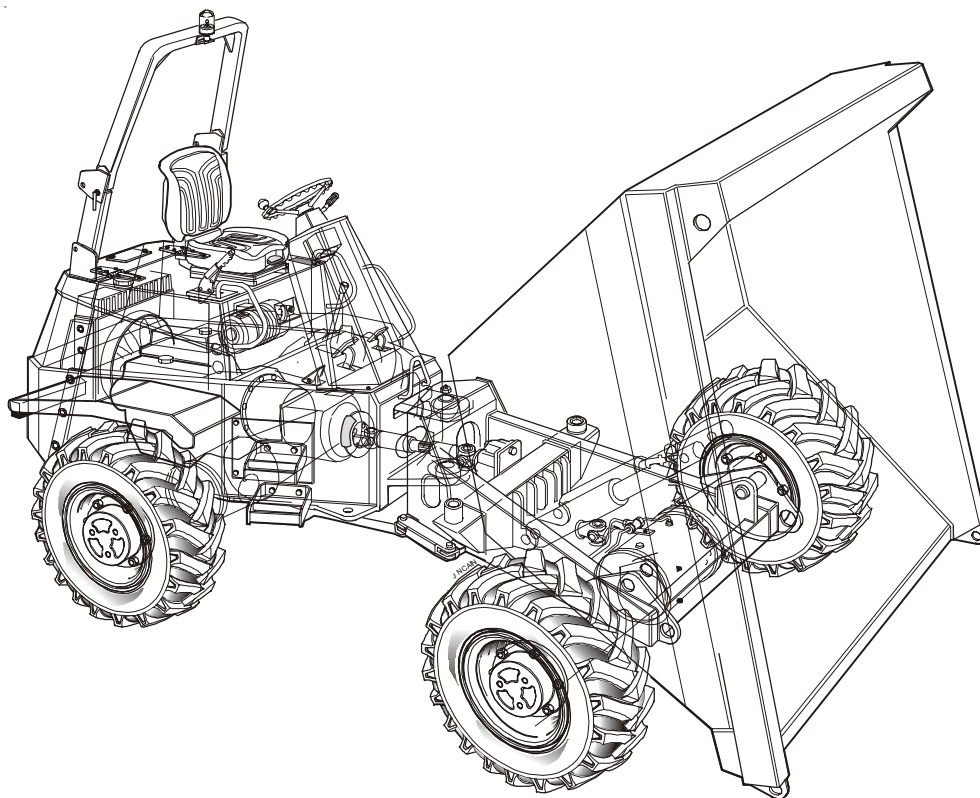
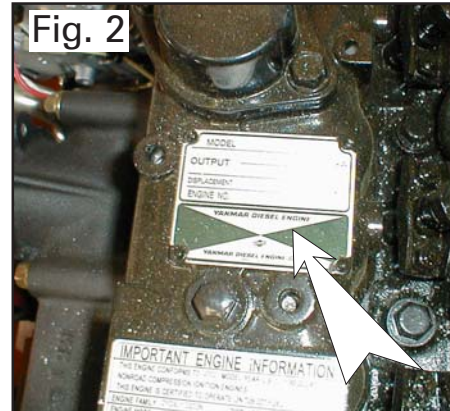
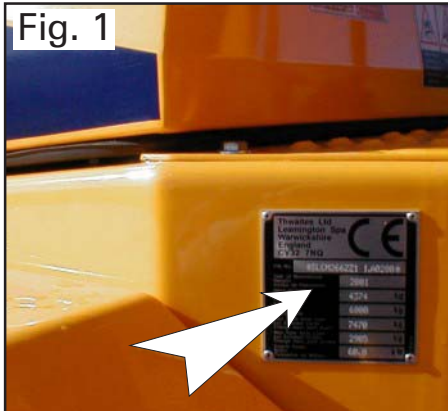


**Thwaites****220 - 2 TONNE FORWARD TIP****allparts****Thwaites**  
**allparts**

Thwaites Ltd  
Leamington Spa  
Warwickshire  
CV32 7NQ  
Tel +44 (0)1926 422471  
Fax +44 (0)1926 450458  
[www.thwaitesdumpers.co.uk](http://www.thwaitesdumpers.co.uk)

**FROM VIN No.** A1945**DATED** 4th FEBRUARY 2003**VIN No.** A \_ \_ \_ \_ \_**ENGINE BUILD No.** 3TNE82A-EWA**PAYLOAD** 2 TONNE**SKIP** FORWARD TIP**TRANSMISSION** MANUAL**TYPE** MACH 220**PREFIX No.** 03

**MACHINE IDENTIFICATION**



**Serial Numbers**

Note machine serial numbers. Always quote them in communication with Thwaites dealer or Head Office.

Model Type (Fig 1.)

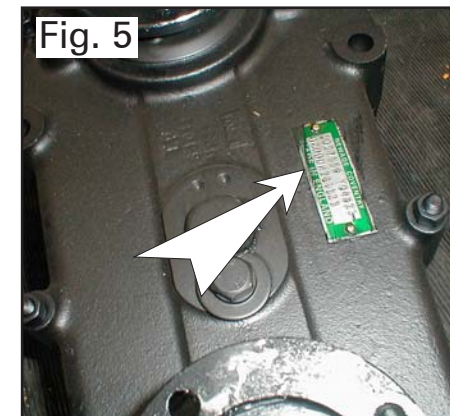
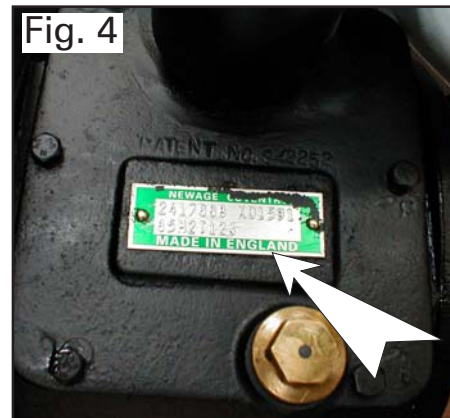
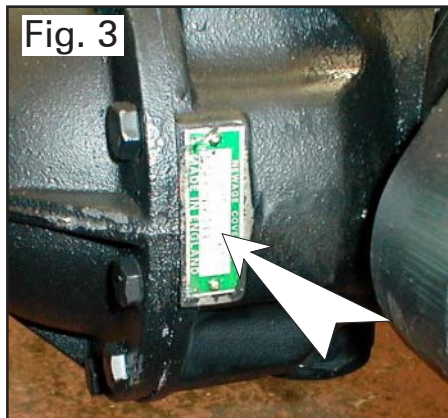
Vin N° (Fig. 1)

Engine Serial N° (Fig. 2)

Axle Serial N° (Fig. 3)      Front  
Rear

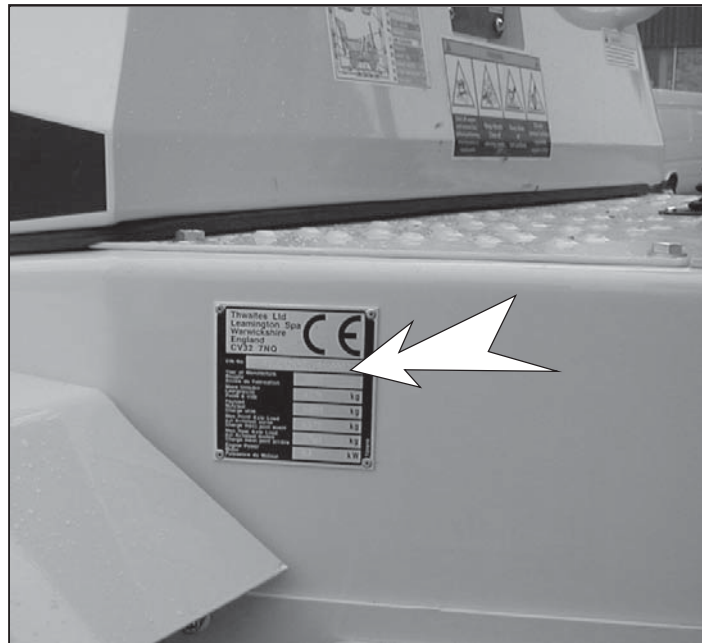
Gearbox N° (Fig. 4)

Transfer Box N° (Fig. 5)



**VEHICLE IDENTIFICATION NUMBER - (VIN)**

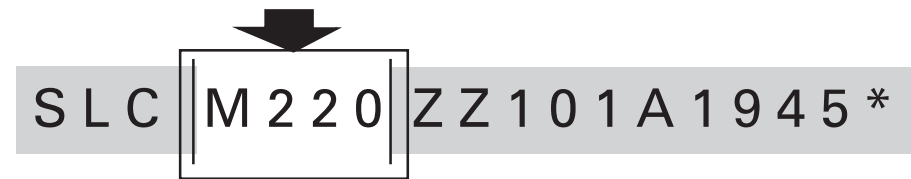
Thwaites have now adopted the international identification system known as VEHICLE IDENTIFICATION NUMBER normally referred to as VIN.



The VIN number incorporates a number of security features and also the machine model and individual serial number.

**Important note:** *Do not use this parts manual to order replacement spares if the prefix level of your machine is higher than the number quoted at the front of this parts manual.*

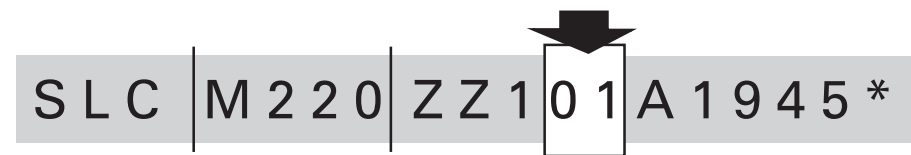
When ordering replacement spares it is important that the model or MACH number is used to identify the correct parts manual.



The year of manufacture:



The Machine Parts Manual issue level denoted by the two digit Prefix Number:

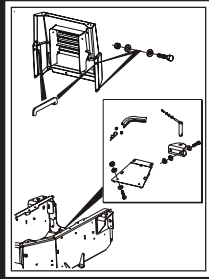


The unique machine serial number:



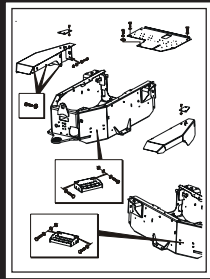
Please ensure that these numbers are quoted in all correspondence with your Thwaites distributor.

**REAR COVER ASSEMBLY**



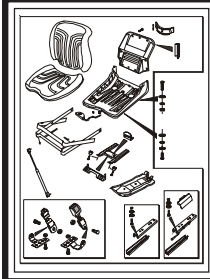
PAGE 1

**REAR CHASSIS ASSEMBLY**



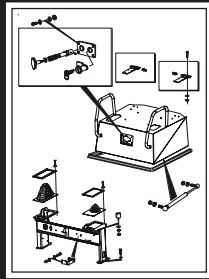
PAGE 2

**SEAT ASSEMBLY**



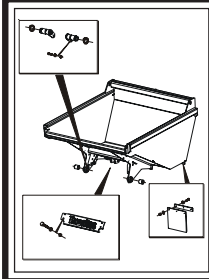
PAGE 3

**ENGINE COVER ASSEMBLY**



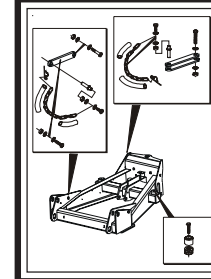
PAGE 4

**SKIP ASSEMBLY**



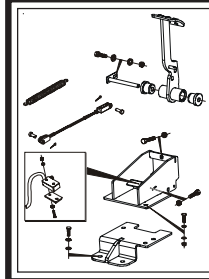
PAGE 5

**FRONT CHASSIS ASSEMBLY**



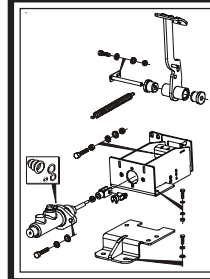
PAGE 6

**CLUTCH PEDAL ASSEMBLY**



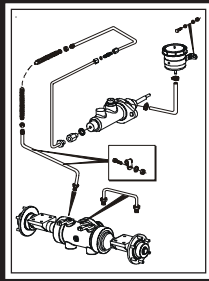
PAGE 7

**BRAKE PEDAL ASSEMBLY**



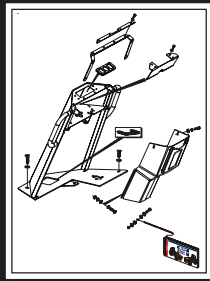
PAGE 8

**BRAKE CIRCUIT**



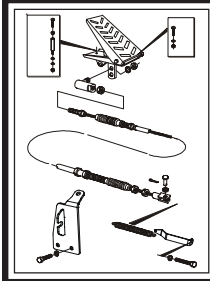
PAGE 9

**LEG GUARD ASSEMBLY**



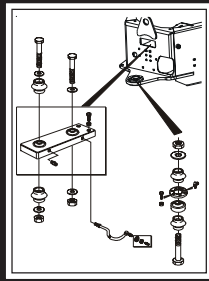
PAGE 10

**THROTTLE ASSEMBLY**



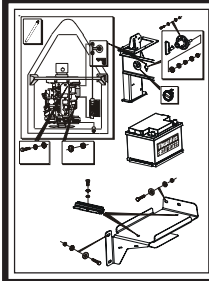
PAGE 11

**KINGLINK ASSEMBLY**



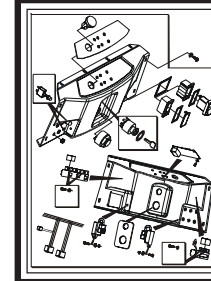
PAGE 12

**BATTERY BOX ASSEMBLY**



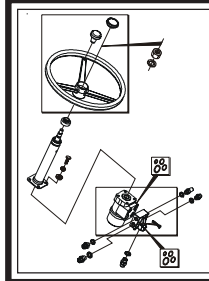
PAGE 13

**DASH PANEL ASSEMBLY**



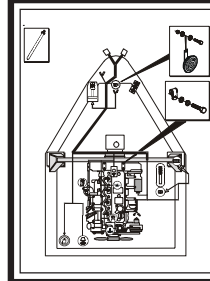
PAGE 14

**STEERING ASSEMBLY**



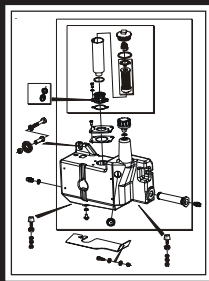
PAGE 15

**ENGINE HARNESS**



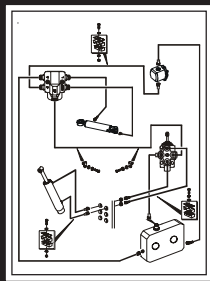
PAGE 16

**HYD. TANK ASSEMBLY**



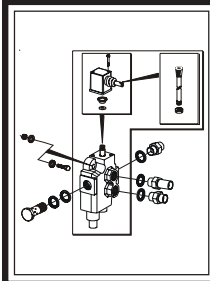
PAGE 17 & 18

**HYD. CIRCUIT CONTROLS**



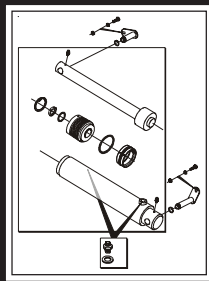
PAGE 19

**TIPPING VALVE ASSEMBLY**



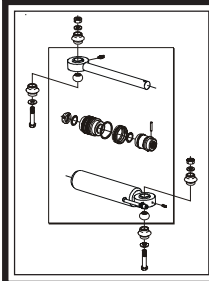
PAGE 20

**TIPPING RAM ASSEMBLY**



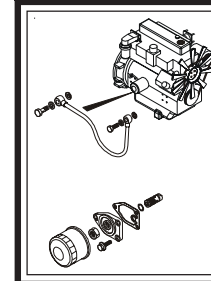
PAGE 21

**STEERING RAM ASSEMBLY**



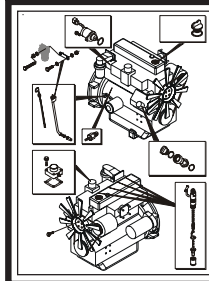
PAGE 22

**ENGINE - OIL FILTER ASSY.**



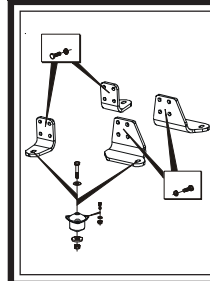
PAGE 23

**ENGINE ACCESSORIES**



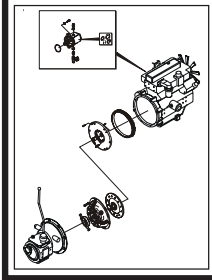
PAGE 24

**ENGINE MOUNTINGS**



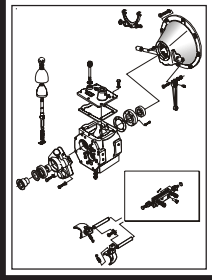
PAGE 25

**CLUTCH ASSY. & HYD. PUMP**



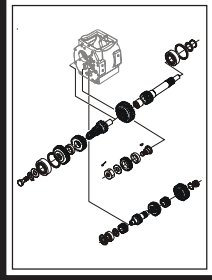
PAGE 26

**G/BOX - FORKS & HOUSING**



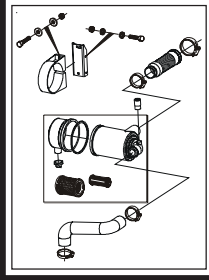
PAGE 27 & 28

**GEARBOX - INTERNAL**



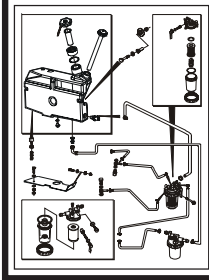
PAGE 29

**AIR CLEANER ASSEMBLY**



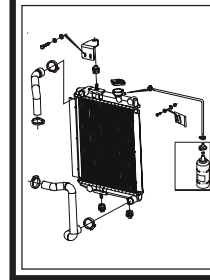
PAGE 30

**FUEL TANK ASSEMBLY**



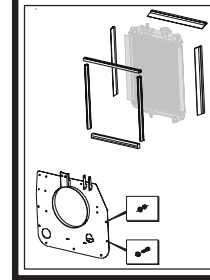
PAGE 31 & 32

**RADIATOR & FIXINGS**



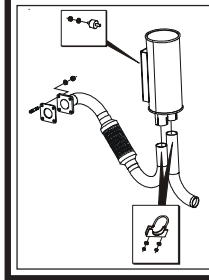
PAGE 33

**RAD. SEALS & FIXINGS**



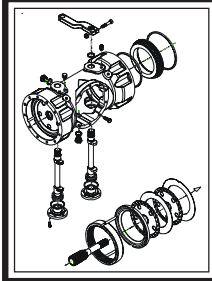
PAGE 34

**EXHAUST SYSTEM**



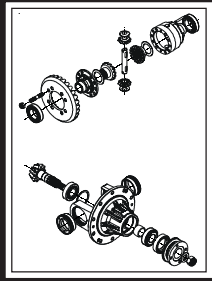
PAGE 35

**FRONT AXLE - MAIN CASE**



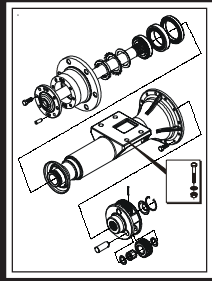
PAGE 36

**FRONT AXLE - DIFF ASSEMBLY**



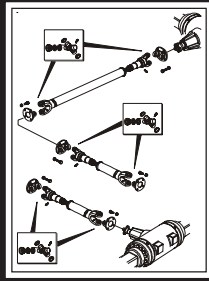
PAGE 37

**FRONT AXLE - HUB & ARM**



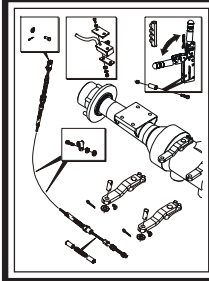
PAGE 38

**PROPSHAFTS**



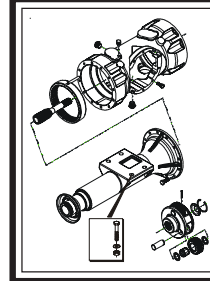
PAGE 39

**HANDBRAKE ASSEMBLY**



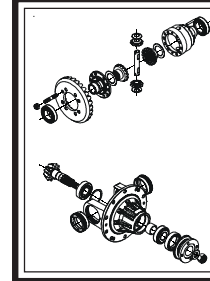
PAGE 40

**REAR AXLE - MAIN CASE**



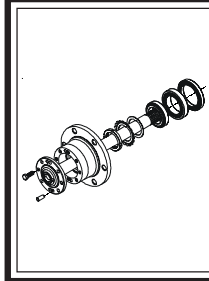
PAGE 41

**REAR AXLE - DIFF ASSEMBLY**



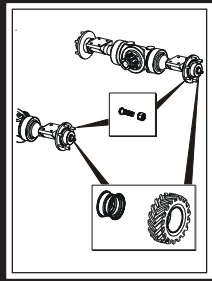
PAGE 42

**REAR AXLE - HUB & ARM**



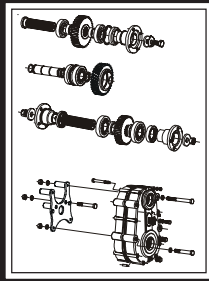
PAGE 43

**WHEEL ASSEMBLY**



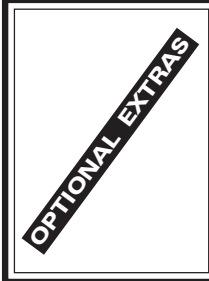
PAGE 44

**TRANSFER BOX**



PAGE 45 & 46

**OPTIONAL EXTRAS**



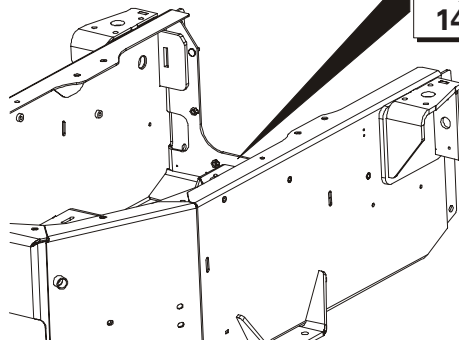
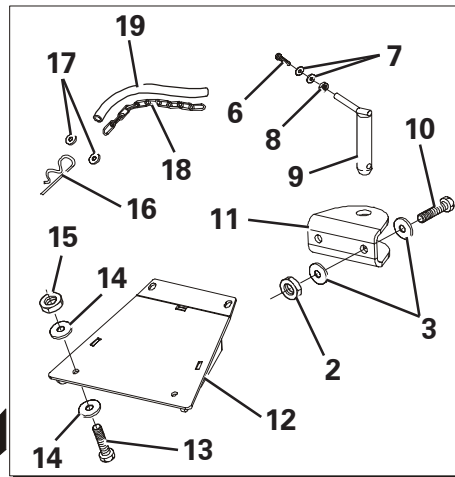
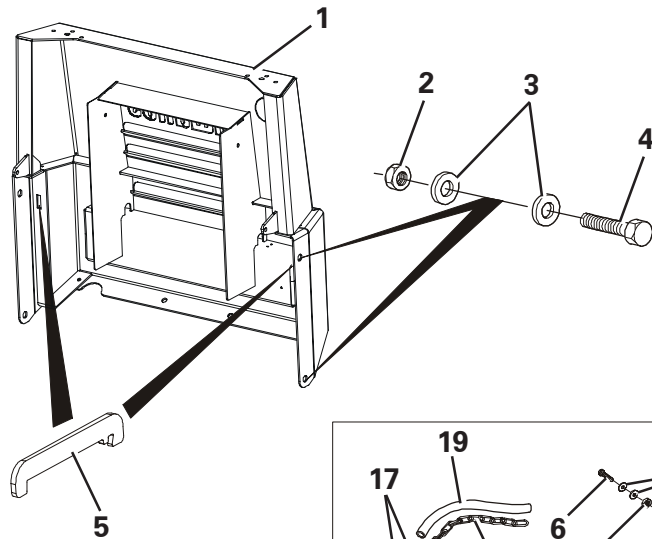
PAGE 47

**MODIFICATIONS & ADDITIONS**



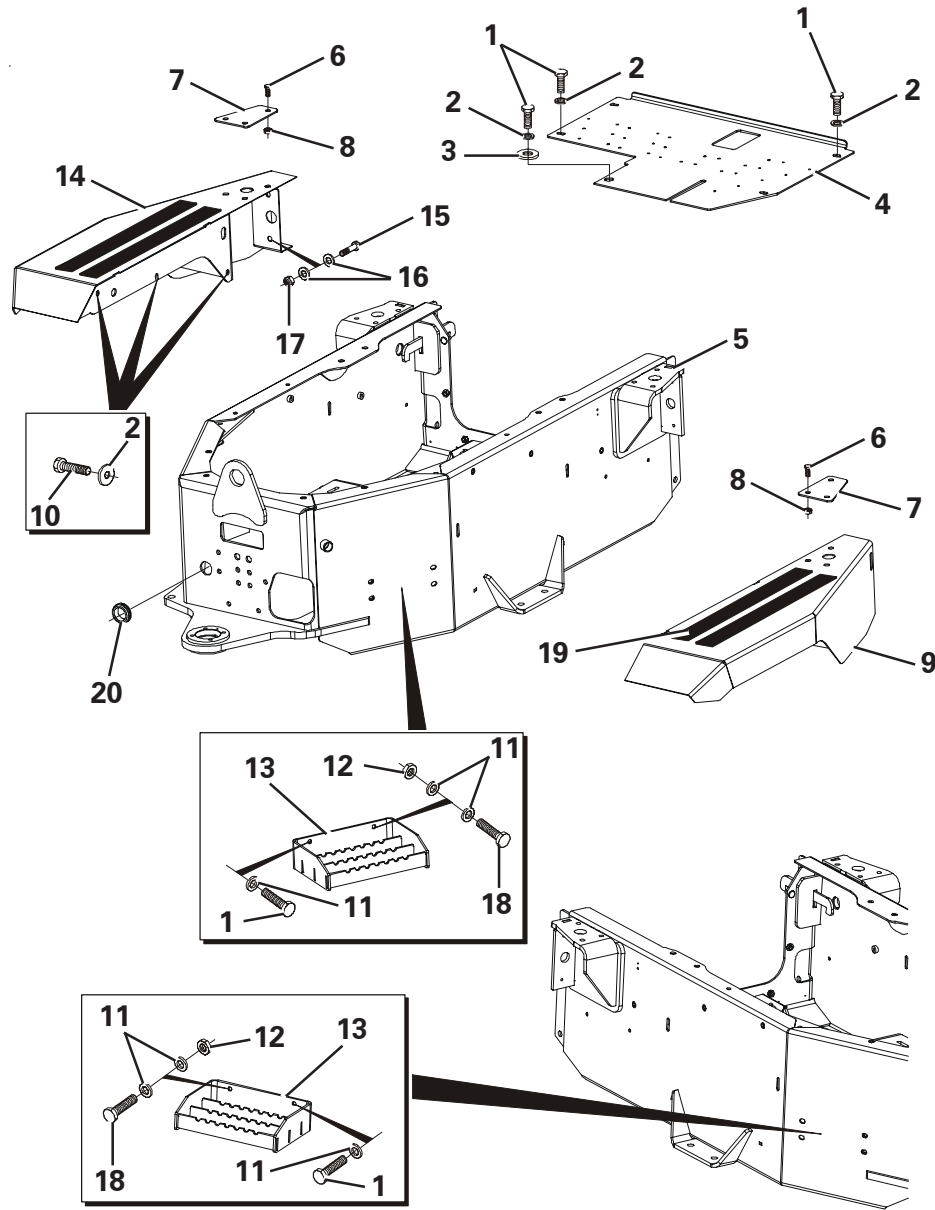
PAGE 48, 49 & 50

**REAR COVER ASSEMBLY**



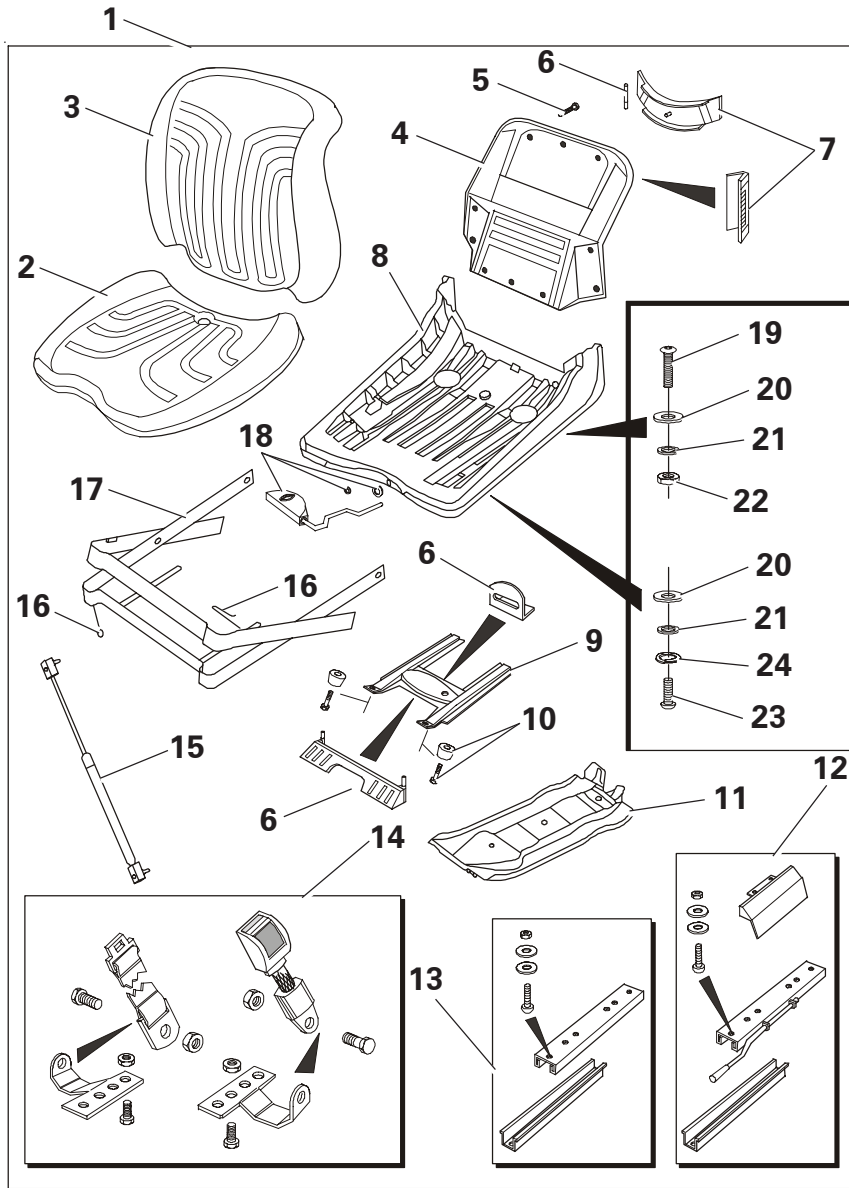
Item	Part No.	Description	Qty	U/M
1	T101102	REAR CHASSIS COVER ASSY	1.0	EA
2	T14910	STOVER NUT	6.0	EA
3	T100867	PLAIN WASHER	12.0	EA
4	T11316	BOLT	4.0	EA
5	T101345	RETAINING STRAP	2.0	EA
6	T16477	BOLT	1.0	EA
7	T13911	FLAT WASHER	2.0	EA
8	T10431	NUT	1.0	EA
9	T100156	TOWING PIN	1.0	EA
10	T11315	BOLT	2.0	EA
11	T100155	TOWING JAW	1.0	EA
12	T101100	TOWING BRACKET	1.0	EA
13	T100470	BOLT	4.0	EA
14	T14748	PLAIN WASHER	8.0	EA
15	T14283	PHILIDAS NUT	4.0	EA
16	T6075	LYNCH PIN	1.0	EA
17	T6668	WASHER	2.0	EA
18	T17507	LOCKING PIN CHAIN	1.0	EA
19	T17508	CHAIN SLEEVE	1.0	EA

**REAR CHASSIS ASSEMBLY**



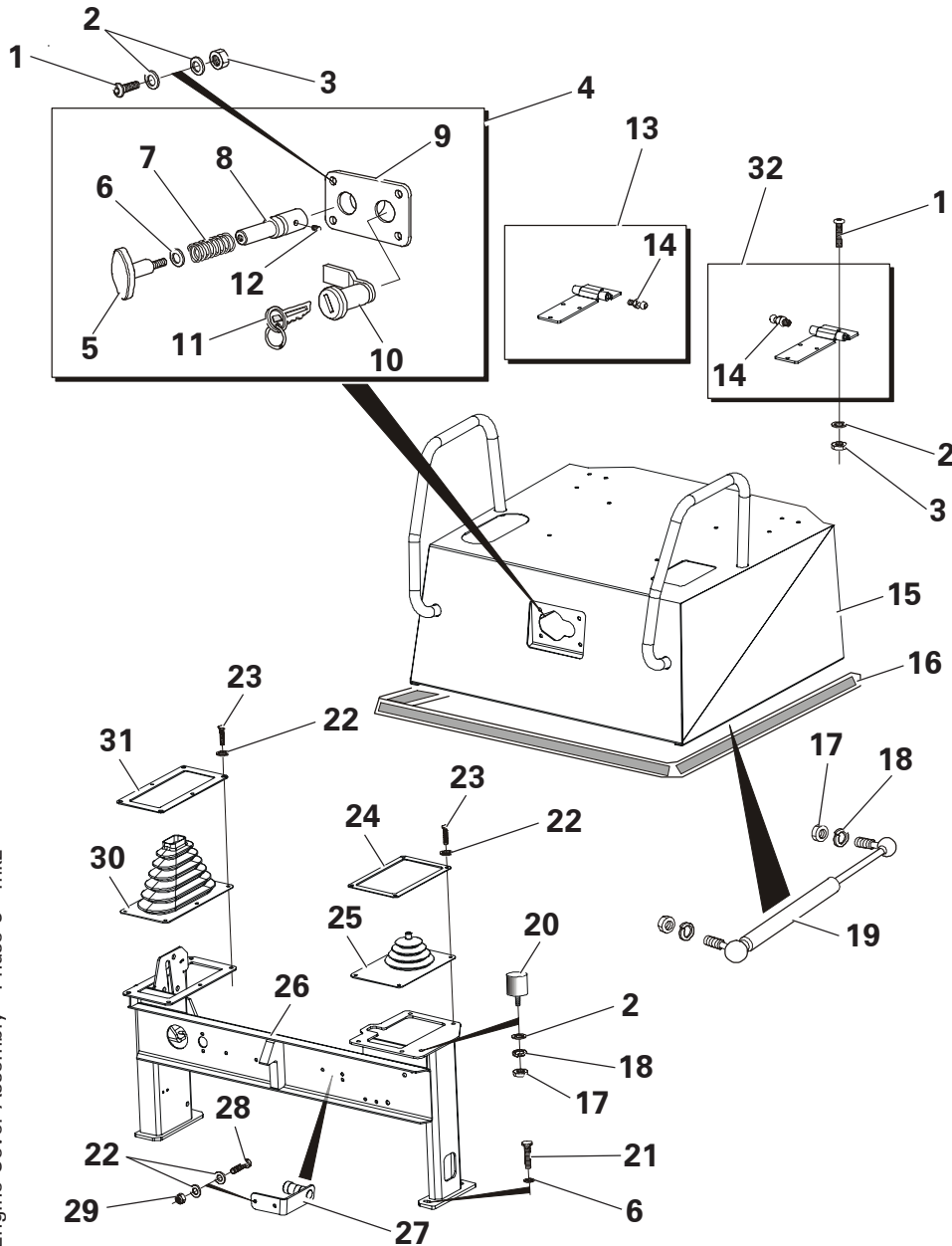
Item	Part No.	Description	Qty	U/M
1	T20618	SET SCREW	9.0	EA
2	T17184	HEAVY DUTY WASHER	11.0	EA
3	T8128	WASHER	1.0	EA
4	T101004	FLOORPLATE	1.0	EA
5	T101103	REAR CHASSIS	1.0	EA
6	T14078	BOLT	6.0	EA
7	T101352	ROPS MOUNTING COVER PLATE	2.0	EA
8	T14283	PHILIDAS NUT	6.0	EA
9	T101116	MUDGUARD ASSY LH	1.0	EA
10	T7466	SET SCREW	6.0	EA
11	T15819	PLAIN WASHER	12.0	EA
12	T13064	NUT	4.0	EA
13	T100147	STEP	2.0	EA
14	T101101	MUDGUARD ASSY RH	1.0	EA
15	T16476	SET BOLT	2.0	EA
16	T13911	FLAT WASHER	4.0	EA
17	T16481	NYLOC NUT	2.0	EA
18	T16505	SET BOLT	4.0	EA
19	T101567	ANTI SLIP MAT	4.0	EA
20	T17123	GROMMET	1.0	EA

**SEAT ASSEMBLY**



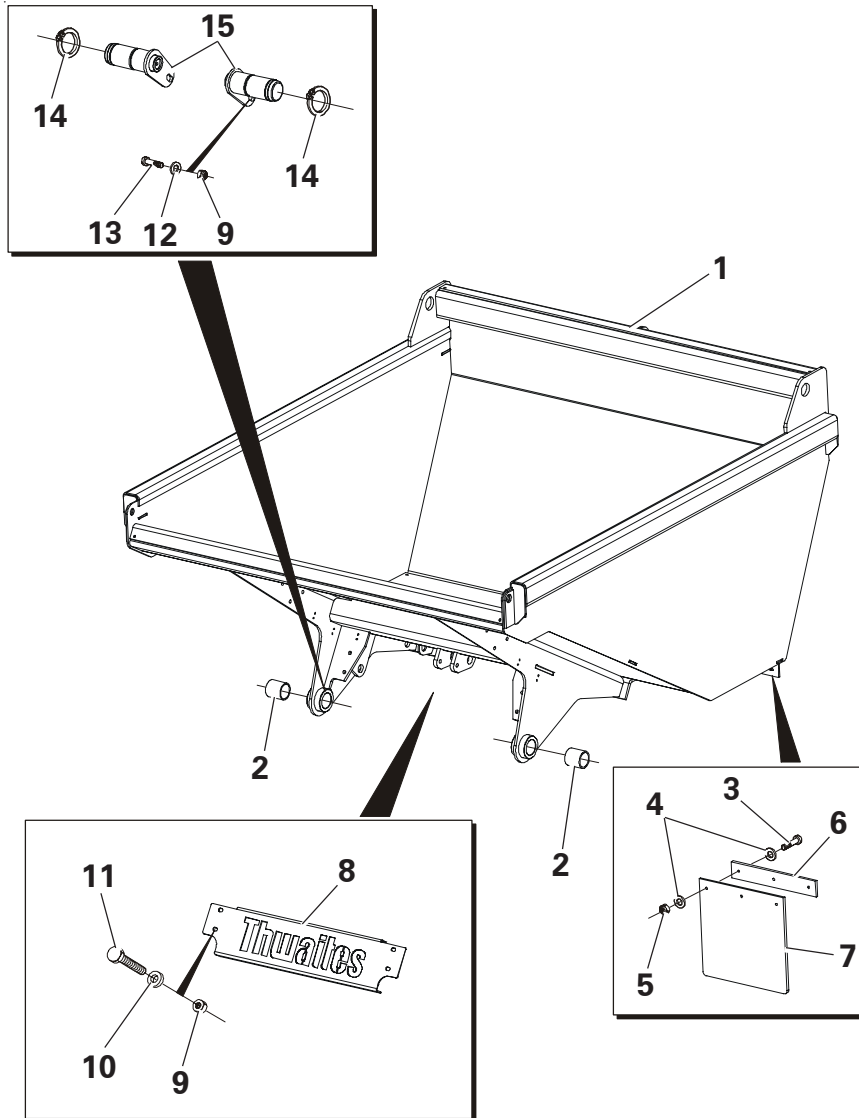
Item	Part No.	Description	Qty	U/M
1	T100024	SEAT-MSG20 C/W BELTS	1.0	EA
2	T52524	SEAT CUSHION VINYL	1.0	EA
3	T51918	UPHOLSTERED BACK REST	1.0	EA
4	T51919	PLATE	1.0	EA
5	T51920	SCREW SET	1.0	EA
6	T51928	FRAME KIT	1.0	EA
7	T51936	BLANKING COVERS	1.0	EA
8	T52525	SEAT PAN	1.0	EA
9	T52530	OUTER SWING ARM	1.0	EA
10	T51927	SCREW & WASHER SET	1.0	EA
11	T52529	INNER SWING ARM	1.0	EA
12	T51929	SLIDE RAIL KIT	1.0	EA
13	T51930	SLIDE RAIL	1.0	EA
14	T52536	SEAT BELT	1.0	EA
15	T52531	SHOCK ABSORBER	1.0	EA
16	T52526	REPAIR KIT	1.0	EA
17	T52527	SUSPENSION COVER	1.0	EA
18	T51921	LEVER	1.0	EA
19	T12971	BUTTON HEAD SCREW	2.0	EA
20	T9345	WASHER	4.0	EA
21	T12973	PLAIN WASHER	4.0	EA
22	T13457	NYLOC NUT	2.0	EA
23	T12832	DOME HEAD SCREW	2.0	EA
24	T12972	SPRING WASHER	2.0	EA

## ENGINE COVER ASSEMBLY



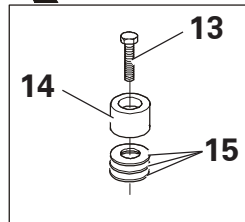
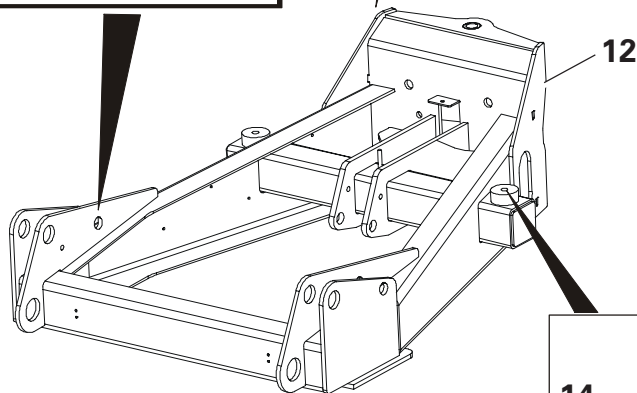
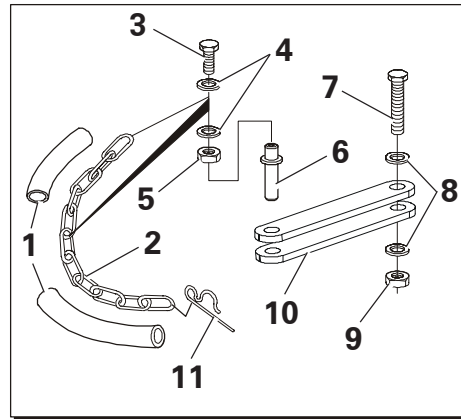
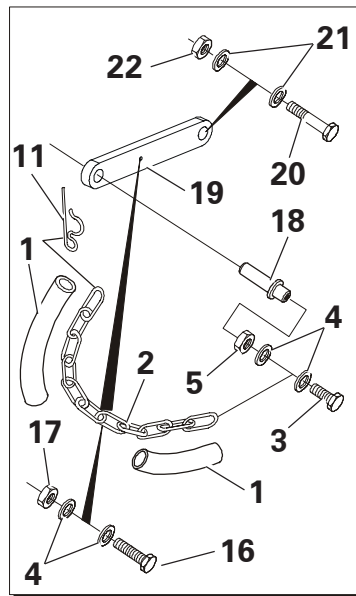
Item	Part No.	Description	Qty	U/M
1	T12971	BUTTON HEAD SCREW	16.0	EA
2	T12973	PLAIN WASHER	22.0	EA
3	T13457	NYLOC NUT	16.0	EA
4	T100211	LOCK ASSY	1.0	EA
5	T100216	RENCOL HANDLE	1.0	EA
6	T10734	H/DUTY WASHER	5.0	EA
7	T100287	SPRING	1.0	EA
8	T100266	LOCK PLUNGER	1.0	EA
9	T100286	WELDED LOCK ASSY	1.0	EA
10	T100265	COMPARTMENT LOCK	1.0	EA
11	T50479	SWITCH KEY	1.0	EA
12	T100477	GRUB SCREW	1.0	EA
13*	T101780	HINGE RH (WITH GREASE NIPPLE)	1.0	EA
14	T16586	GREASE NIPPLE - STRAIGHT	2.0	EA
15	T101104	ENGINE COVER	1.0	EA
16	T101249	SEAL	1.0	EA
17	T9775	NUT	6.0	EA
18	T12972	SPRING WASHER	6.0	EA
19	T100610	GAS STRUT	2.0	EA
20	T100214	RUBBER BUFFER	2.0	EA
21	T16505	SET BOLT	4.0	EA
22	T13911	FLAT WASHER	13.0	EA
23	T16492	DOME HEAD SCREW	9.0	EA
24	T100569	TIPPING GAITER RETAINING PLATE	1.0	EA
25	T100289	TIPPING LEVER GAITER	1.0	EA
26	T100975	CROSS BRACE	1.0	EA
27	T101347	BEACON STORAGE BRACKET	1.0	EA
28	T16477	BOLT	2.0	EA
29	T16481	NYLOC NUT	2.0	EA
30	T100911	GAITER	1.0	EA
31	T100570	HANDBRAKE GAITER RETAINER	1.0	EA
32*	T101779	HINGE LH (WITH GREASE NIPPLE)	1.0	EA

## SKIP ASSEMBLY



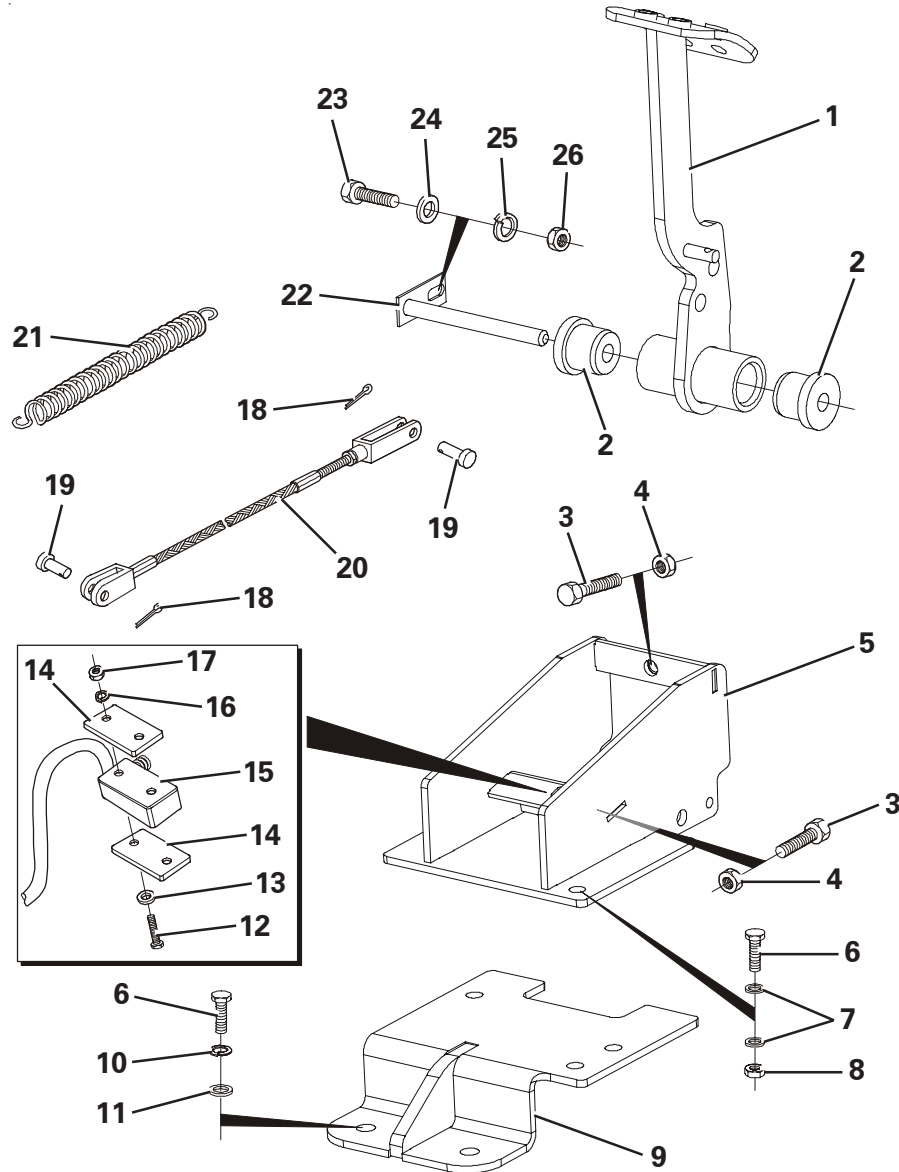
Item	Part No.	Description	Qty	U/M
1	T100991	SKIP	1.0	EA
2	T100029	BUSH	2.0	EA
3	T17086	BUTTON HEAD SCREW	6.0	EA
4	T13911	FLAT WASHER	12.0	EA
5	T16481	NYLOC NUT	6.0	EA
6	T18068	MUDFLAP RETAINER	2.0	EA
7	T18059	RUBBER MUDFLAP	2.0	EA
8	T100964	FRONT NAMEPLATE	1.0	EA
9	T13064	NUT	6.0	EA
10	T15819	PLAIN WASHER	4.0	EA
11	T20618	SET SCREW	4.0	EA
12	T10734	H/DUTY WASHER	2.0	EA
13	T16505	SET BOLT	2.0	EA
14	T100099	CIRCLIP	2.0	EA
15	T100995	SKIP PIVOT PIN	2.0	EA

**FRONT CHASSIS ASSEMBLY**



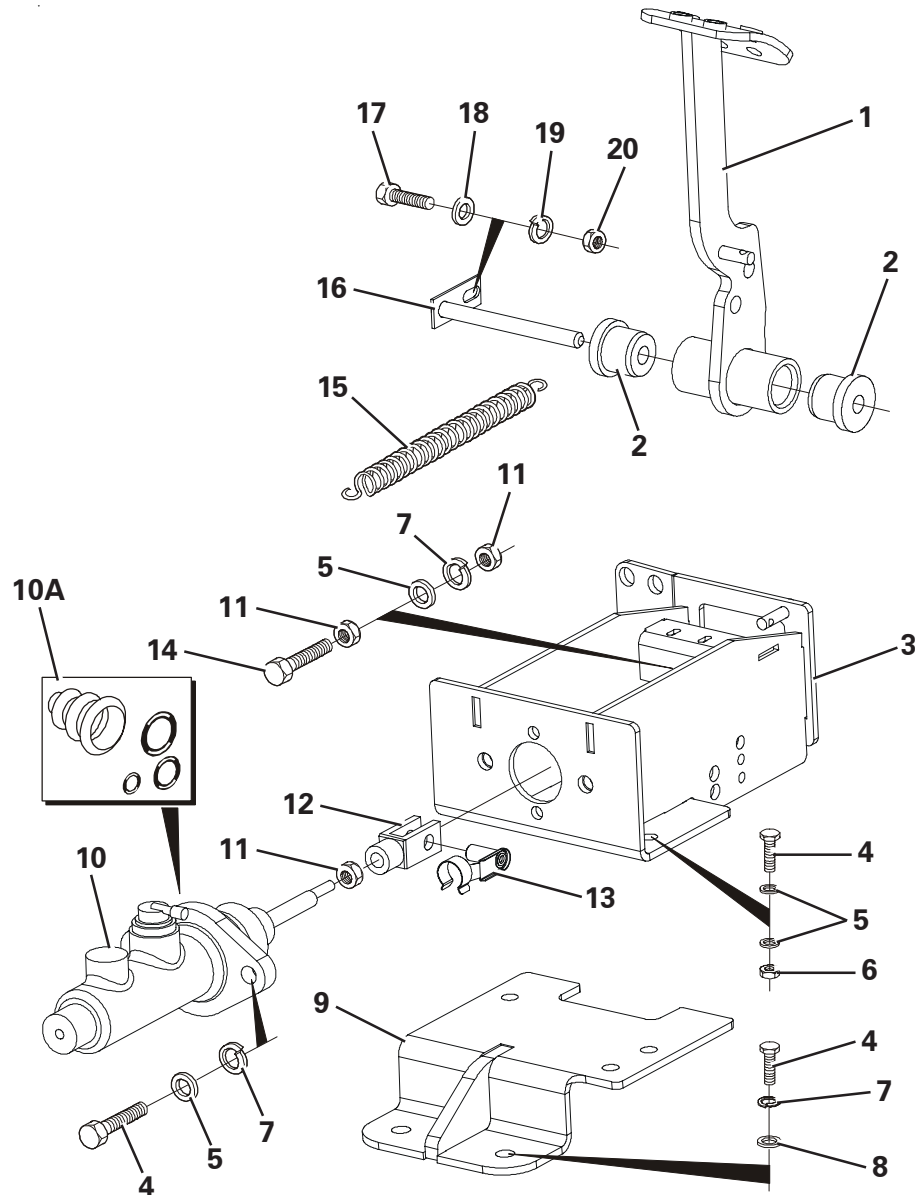
Item	Part No.	Description	Qty	U/M
1	T19465	CHAIN SLEEVE	4.0	EA
2	T18186	PIN RETAINING CHAIN	2.0	EA
3	T16476	SET BOLT	3.0	EA
4	T13911	FLAT WASHER	8.0	EA
5	T10431	NUT	3.0	EA
6	T101036	CHASSIS LOCK PIN ASSY	1.0	EA
7	T100310	BOLT	1.0	EA
8	T17306	PLAIN WASHER	2.0	EA
9	T13739	PHILIDAS NUT	1.0	EA
10	T101035	CHASSIS LOCK BAR ASSY	1.0	EA
11	T10012	LINCH PIN	2.0	EA
12	T100974	FRONT CHASSIS	1.0	EA
13	T15571	BOLT	2.0	EA
14	T100302	SKIP PAD	2.0	EA
15	T100578	SKIP PAD SPACER 3mm	A/R	EA
	T100303	SKIP PAD SPACER 5mm	A/R	EA
	T100386	SKIP PAD SPACER 10mm	A/R	EA
16	T16506	BOLT	1.0	EA
17	T13910	PHILIDAS NUT	1.0	EA
18	T101185	SKIP PROP PIN	1.0	EA
19	T100963	SKIP PROP	1.0	EA
20	T101269	BOLT	1.0	EA
21	T7695	WASHER	2.0	EA
22	T20320	PHILIDAS NUT	1.0	EA

CLUTCH PEDAL ASSEMBLY



Item	Part No.	Description	Qty	U/M
1	T100093	PEDAL	1.0	EA
2	T100110	BUSH	2.0	EA
3	T12694	SET SCREW	2.0	EA
4	T9775	NUT	2.0	EA
5	T100672	CLUTCH PEDAL BRKT	1.0	EA
6	T20618	SET SCREW	4.0	EA
7	T15819	PLAIN WASHER	4.0	EA
8	T13064	NUT	2.0	EA
9	T100984	PEDAL MOUNTING BRKT	1.0	EA
10	T13362	SPRING WASHER	2.0	EA
11	T10734	H/DUTY WASHER	2.0	EA
12	T13321	SET SCREW	2.0	EA
13	T11440	WASHER	2.0	EA
14	T13289	MICRO SWITCH BACKING PLATE	2.0	EA
15	T100223	MICRO SWITCH	1.0	EA
16	T11439	SPRING WASHER	2.0	EA
17	T11447	NUT	2.0	EA
18	T6702	SPLIT PIN	2.0	EA
19	T6951	CLEVIS PIN	2.0	EA
20	T100789	CLUTCH CABLE	1.0	EA
21	T7026	SPRING	1.0	EA
22	T100096	PEDAL SHAFT	1.0	EA
23	T16477	BOLT	1.0	EA
24	T13911	FLAT WASHER	1.0	EA
25	T14837	SPRING WASHER	1.0	EA
26	T10431	NUT	1.0	EA

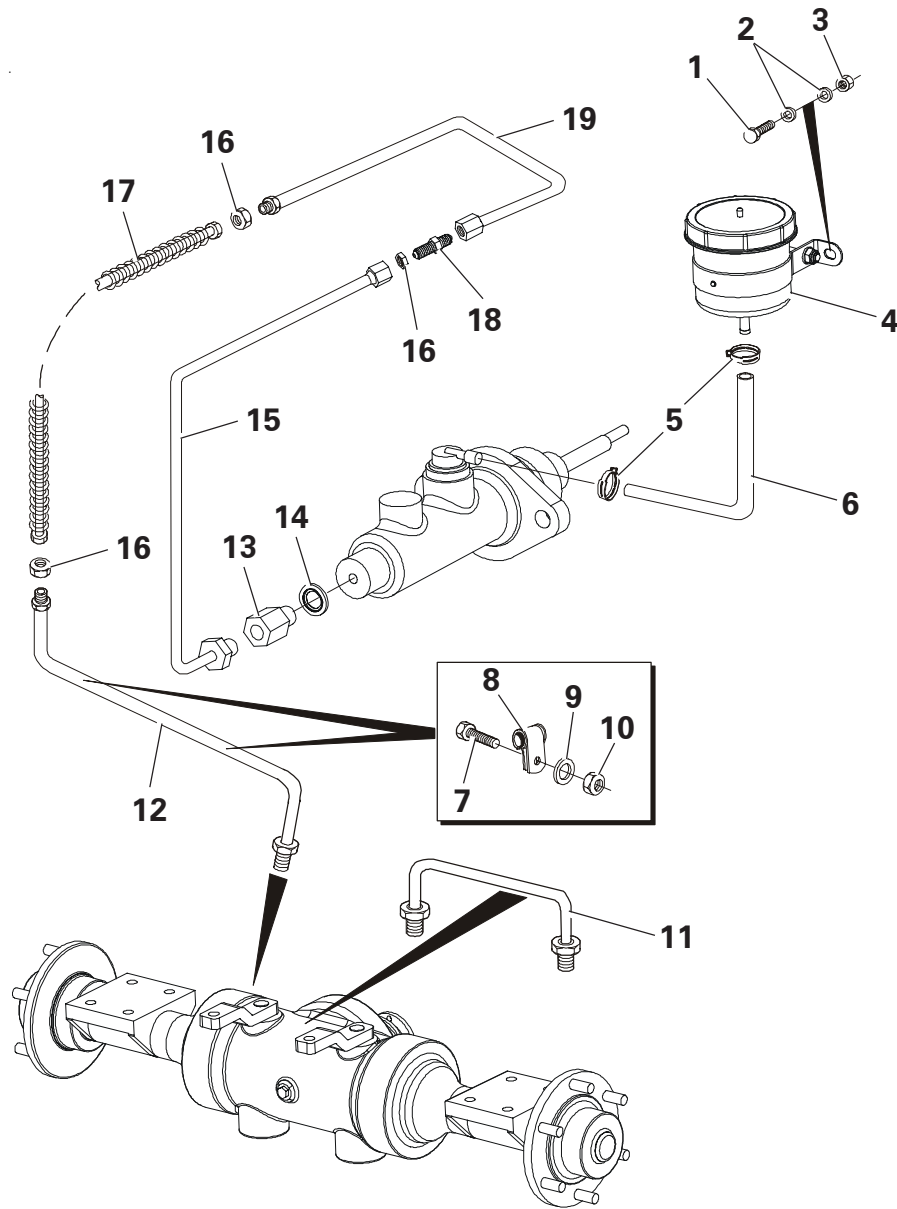
**BRAKE PEDAL ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T100093	PEDAL	1.0	EA
2	T100110	BUSH	2.0	EA
3	T100351	MASTER CYLINDER MTG BRKT	1.0	EA
4	T20618	SET SCREW	6.0	EA
5	T15819	PLAIN WASHER	7.0	EA
6	T13064	NUT	2.0	EA
7	T13362	SPRING WASHER	5.0	EA
8	T10734	H/DUTY WASHER	2.0	EA
9	T100984	PEDAL MOUNTING BRKT	1.0	EA
10	T100399	MASTER CYLINDER (SINGLE)	1.0	EA
10A	T52799	SEAL KIT	1.0	EA
11	T12509	NUT	3.0	EA
12	T100083	FORK END	1.0	EA
13	T100084	SPRING CLEVIS PIN	1.0	EA
14	T7466	SET SCREW	1.0	EA
15	T100318	BRAKE SPRING	1.0	EA
16	T100096	PEDAL SHAFT	1.0	EA
17	T16477	BOLT	1.0	EA
18	T13911	FLAT WASHER	1.0	EA
19	T14837	SPRING WASHER	1.0	EA
20	T10431	NUT	1.0	EA

Brake Pedal Assembly - Phase 3

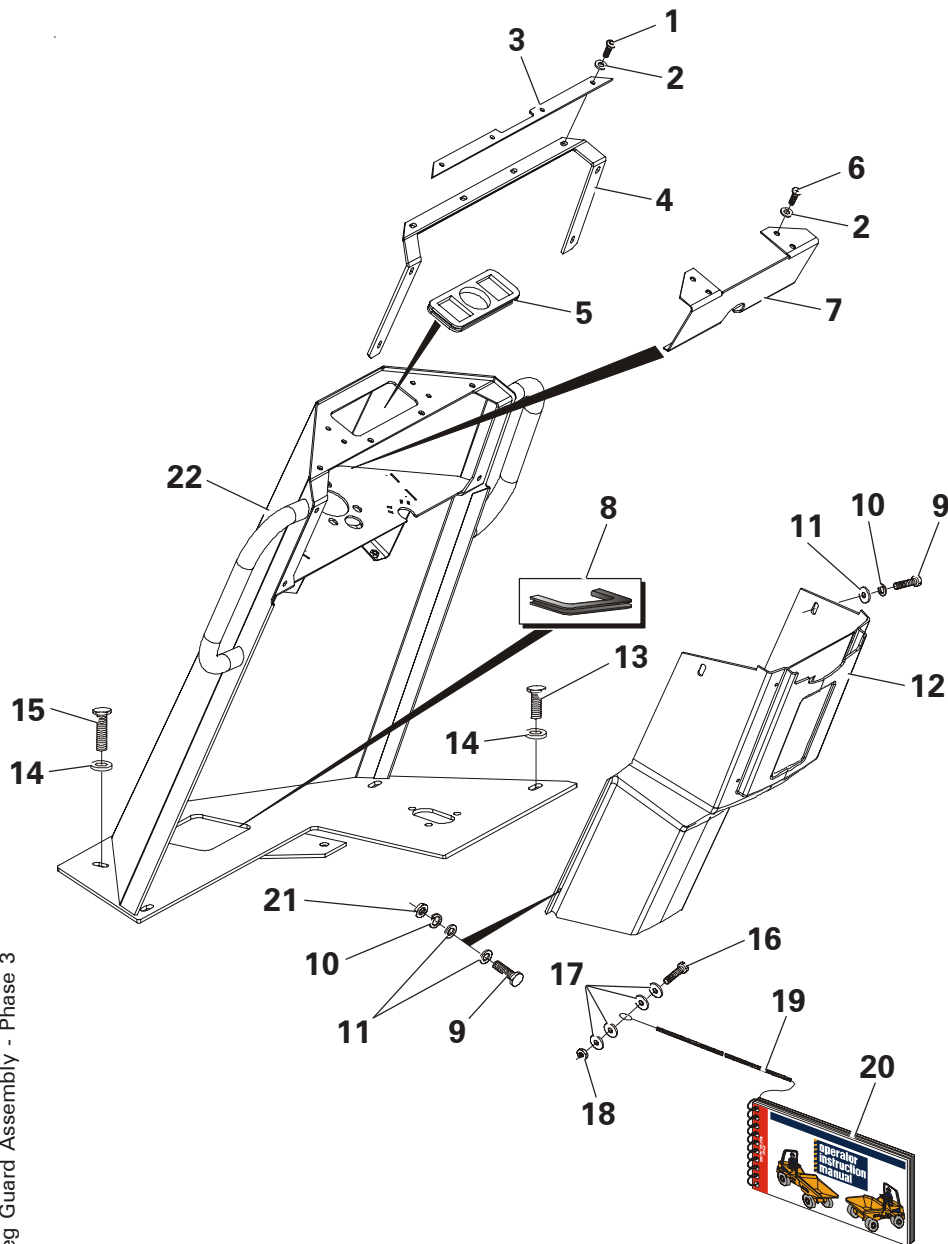
**BRAKE CIRCUIT - MANUAL**



Item	Part No.	Description	Qty	U/M
1	T10917	SET BOLT	2.0	EA
2	T13911	FLAT WASHER	4.0	EA
3	T16481	NYLOC NUT	2.0	EA
4	T100402	RESERVOIR	1.0	EA
5	T100691	HOSE CLIP	2.0	EA
6	T100747	BRAKE HOSE	1.0	EA
7	T16610	BOLT	2.0	EA
8	T11452	PIPE CLIP	2.0	EA
9	T16612	PLAIN WASHER	2.0	EA
10	T16613	NYLOC NUT	2.0	EA
11	T20929	BRAKE PIPE	1.0	EA
12	T101306	BRAKE PIPE	1.0	EA
13	T100701	ADAPTOR	1.0	EA
14	T10940	HYDRAULIC WASHER	1.0	EA
15	T100702	BRAKE PIPE	1.0	EA
16	T8942	NYLOC NUT	3.0	EA
17	T11243	FLEXIBLE BRAKE HOSE	1.0	EA
18	T100697	BRAKE B/H UNION	1.0	EA
19	T101305	BRAKE PIPE	1.0	EA

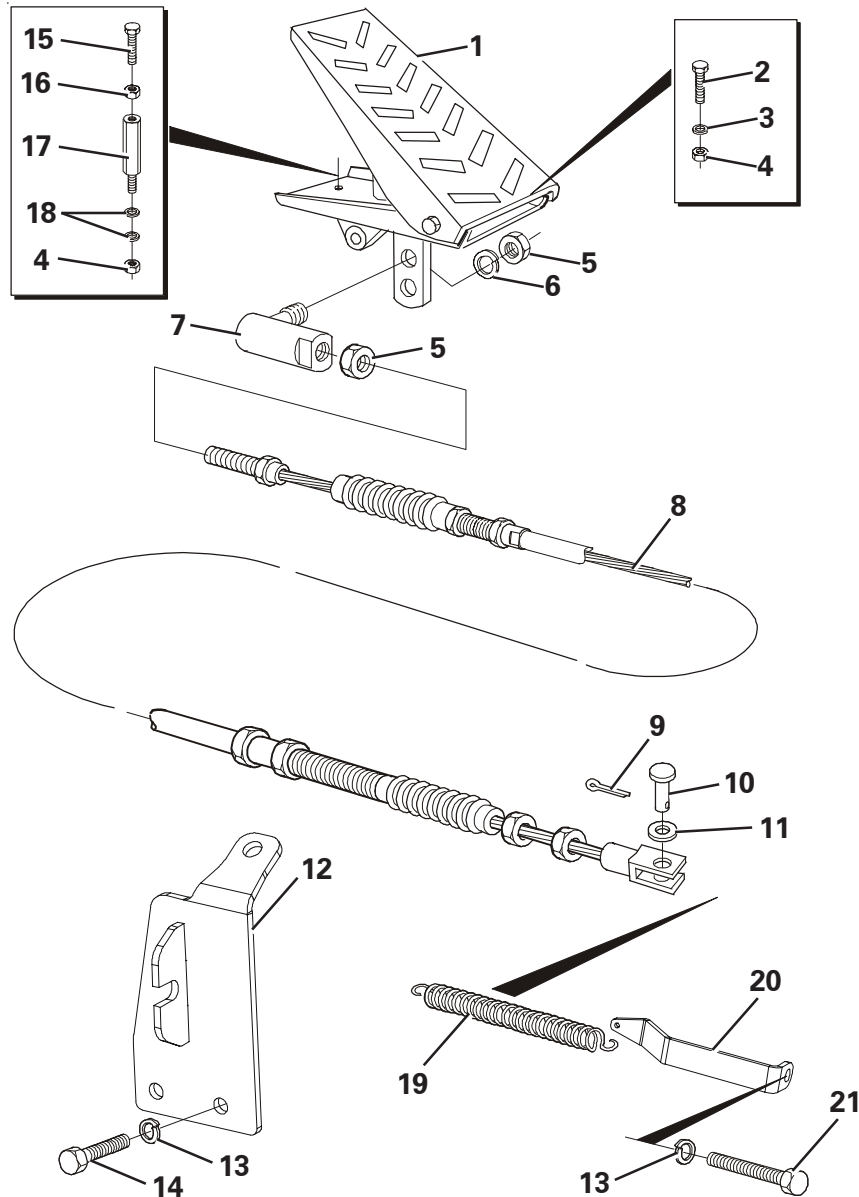
**LEG GUARD ASSEMBLY**

Item	Part No.	Description	Qty	U/M
1	T100315	SCREW	4.0	EA
2	T13911	FLAT WASHER	8.0	EA
3	T100506	CLAMPING STRIP	1.0	EA
4	T100320	SEALING GASKET	1.0	EA
5	T100300	STEERING COLUMN GROMMET	1.0	EA
6	T16492	DOME HEAD SCREW	4.0	EA
7	T100540	SPLASH GUARD	1.0	EA
8	T52795	E J TRIM	1.0	EA
9	T10917	SET BOLT	4.0	EA
10	T14837	SPRING WASHER	4.0	EA
11	T15830	FLAT WASHER	6.0	EA
12	T100159	INNER LEG GUARD	1.0	EA
13	T20618	SET SCREW	3.0	EA
14	T17184	HEAVY DUTY WASHER	5.0	EA
15	T16505	SET BOLT	2.0	EA
16	T12694	SET SCREW	1.0	EA
17	T9345	WASHER	4.0	EA
18	T13457	NYLOC NUT	1.0	EA
19	T100699	RETAINING CABLE	1.0	EA
20	T0418	OPERATOR MANUAL	1.0	EA
21	T10431	NUT	2.0	EA
22	T101015	LEG GUARD ASSY	1.0	EA



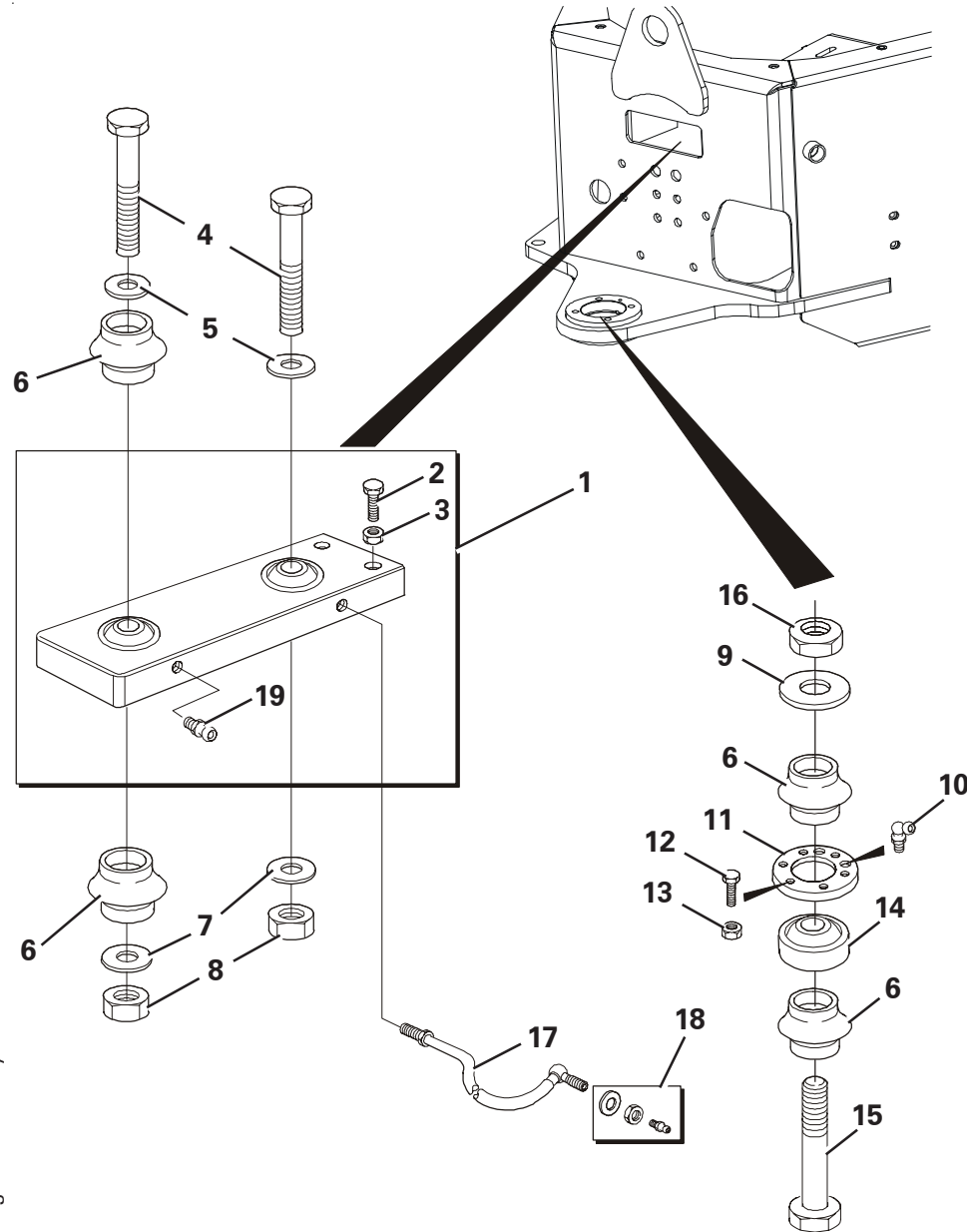
Leg Guard Assembly - Phase 3

## THROTTLE ASSEMBLY



Item	Part No.	Description	Qty	U/M
1	T18931	ACCELERATOR PEDAL	1.0	EA
2	T16477	BOLT	2.0	EA
3	T13911	FLAT WASHER	2.0	EA
4	T16481	NYLOC NUT	3.0	EA
5	T10431	NUT	2.0	EA
6	T14837	SPRING WASHER	1.0	EA
7	T16192	AMEL END	1.0	EA
8	T100629	THROTTLE CABLE	1.0	EA
9	T6744	SPLIT PIN	1.0	EA
10	T6970	ANCHOR PIN	1.0	EA
11	T16612	PLAIN WASHER	1.0	EA
12	T101273	THROTTLE REACTION BRKT	1.0	EA
13	T12972	SPRING WASHER	3.0	EA
14	T7465	SET SCREW	2.0	EA
15	T14152	BOLT	1.0	EA
16	T9775	NUT	1.0	EA
17	T101032	THROTTLE STOP	1.0	EA
18	T15830	FLAT WASHER	2.0	EA
19	T18452	SPRING	1.0	EA
20	T101139	THROTTLE SPRING BRKT	1.0	EA
21	T100353	BOLT	1.0	EA

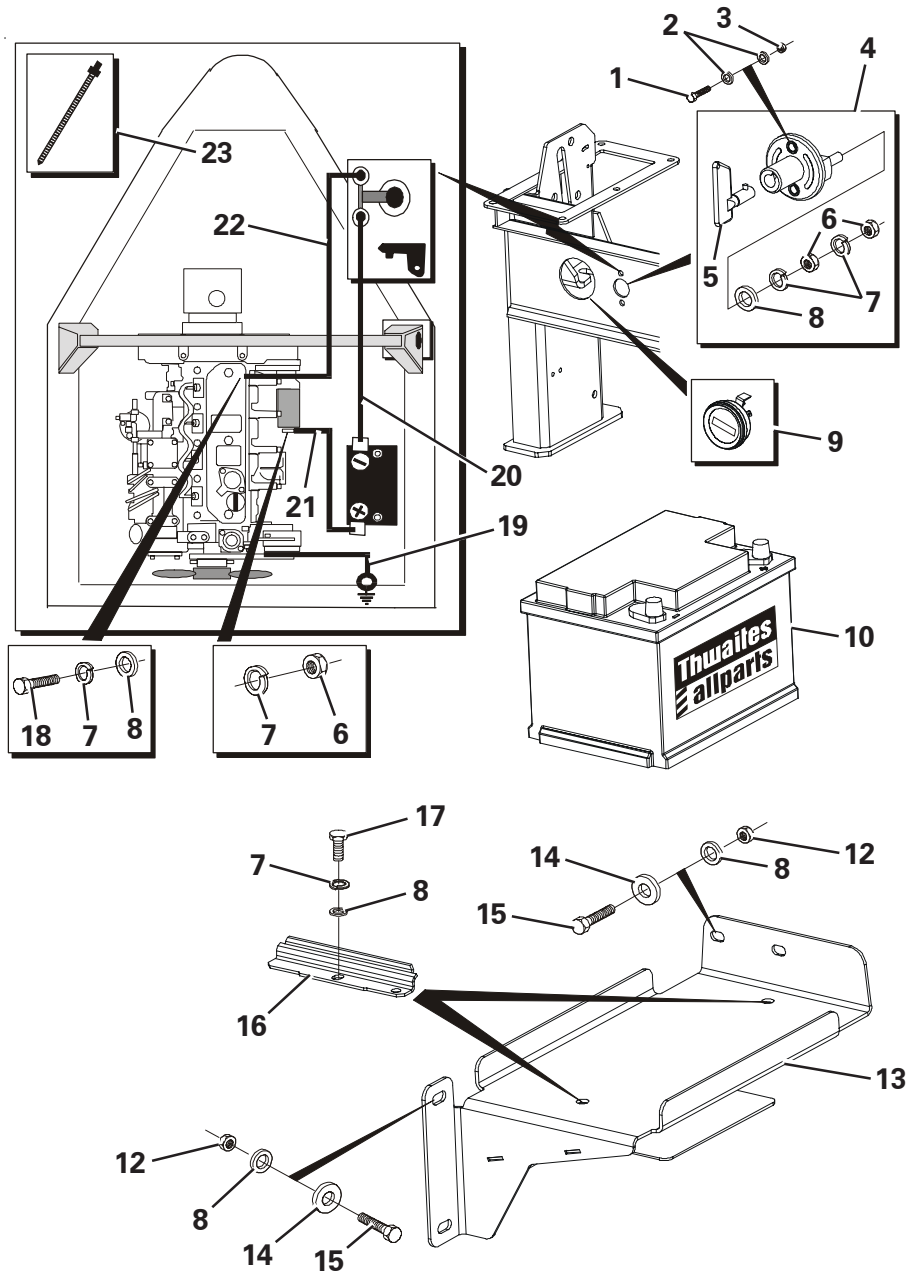
**KINGLINK ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T52796	KINGLINK ASSEMBLY	1.0	EA
2	T16505	SET BOLT	2.0	EA
3	T12509	NUT	2.0	EA
4	T100593	TOP PIVOT BOLT	2.0	EA
5	T6768	WASHER	2.0	EA
6	T10160	RUBBER DUST SEAL	4.0	EA
7	T11811	WASHER	2.0	EA
8	T10143	NUT	2.0	EA
9	T7695	WASHER	1.0	EA
10	T16588	GREASE NIPPLE	1.0	EA
11	T100527	LOWER BEARING CAP	1.0	EA
12*	T101725	BOLT	4.0	EA
13*	T101724	NYLOC NUT	4.0	EA
14	T100268	SPHERICAL BEARING	1.0	EA
15	T101037	BOTTOM PIVOT PIN	1.0	EA
16	T10331	LOCKNUT	1.0	EA
17	T100727	GREASE PIPE	1.0	EA
18	T100390	GREASE NIPPLE ASSEMBLY	1.0	EA
19	T16586	GREASE NIPPLE	1.0	EA

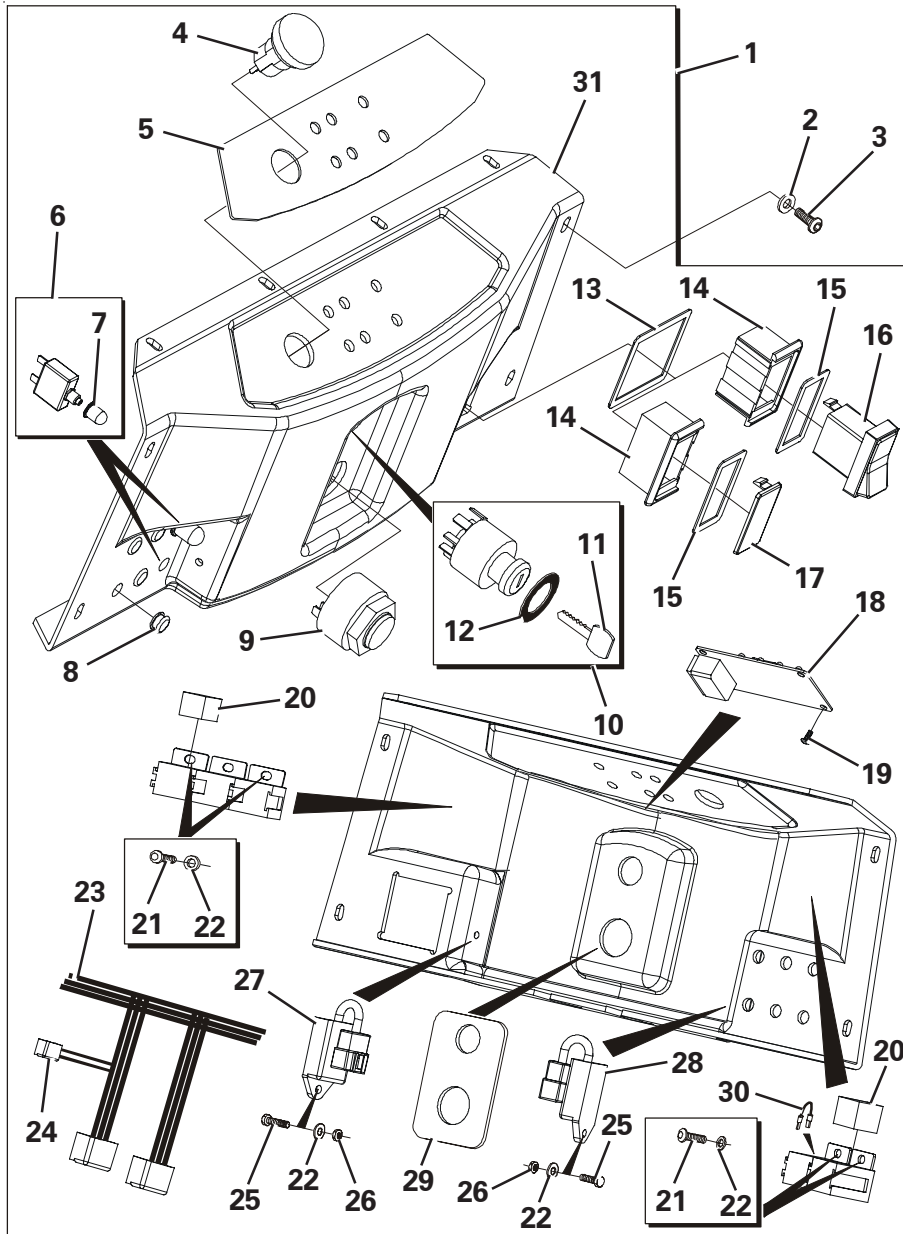
Kinglink Assembly - Phase 2

**BATTERY BOX ASSEMBLY**



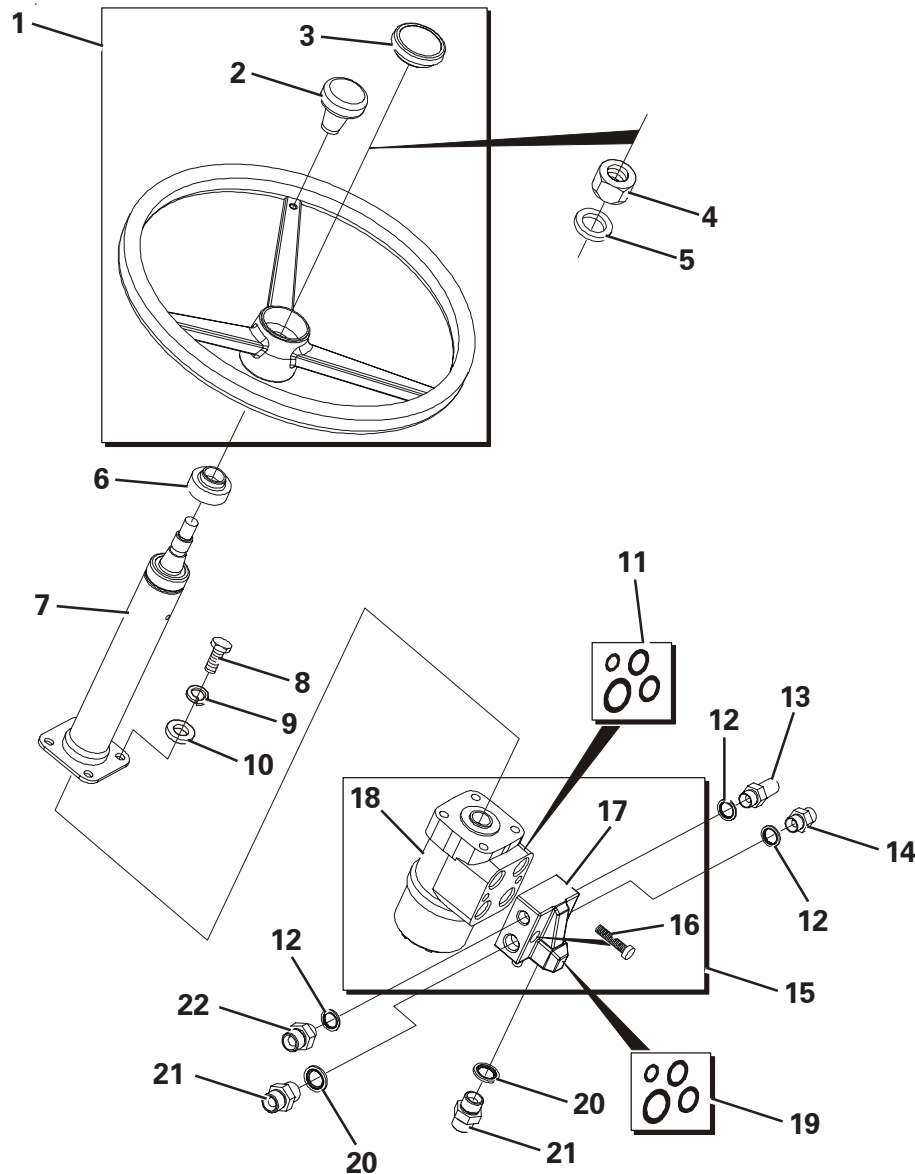
Item	Part No.	Description	Qty	U/M
1	T16611	SCREW	2.0	EA
2	T16612	PLAIN WASHER	4.0	EA
3	T16613	NYLOC NUT	2.0	EA
4	T20846	BATTERY ISOLATOR SWITCH	1.0	EA
5	T52600	KEY	1.0	EA
6	T9775	NUT	5.0	EA
7	T12972	SPRING WASHER	8.0	EA
8	T12973	PLAIN WASHER	9.0	EA
9	T16538	HOURMETER	1.0	EA
10	T100967	BATTERY	1.0	EA
11*	DELETED			
12	T13457	NYLOC NUT	4.0	EA
13	T100992	BATTERY TRAY	1.0	EA
14	T9345	WASHER	4.0	EA
15	T12694	SET SCREW	4.0	EA
16	T101092	BATTERY CLAMP	2.0	EA
17	T7465	SET SCREW	2.0	EA
18	T11673	SET BOLT	1.0	EA
19	T100665	EARTH LEAD	1.0	EA
20	T101279	BATTERY NEGATIVE CABLE	1.0	EA
21	T101278	BATTERY POSITIVE CABLE	1.0	EA
22	T101280	ISOLATOR CABLE	1.0	EA
23	T9164	NYLON CLIPS	A/R	EA

## DASH PANEL ASSEMBLY



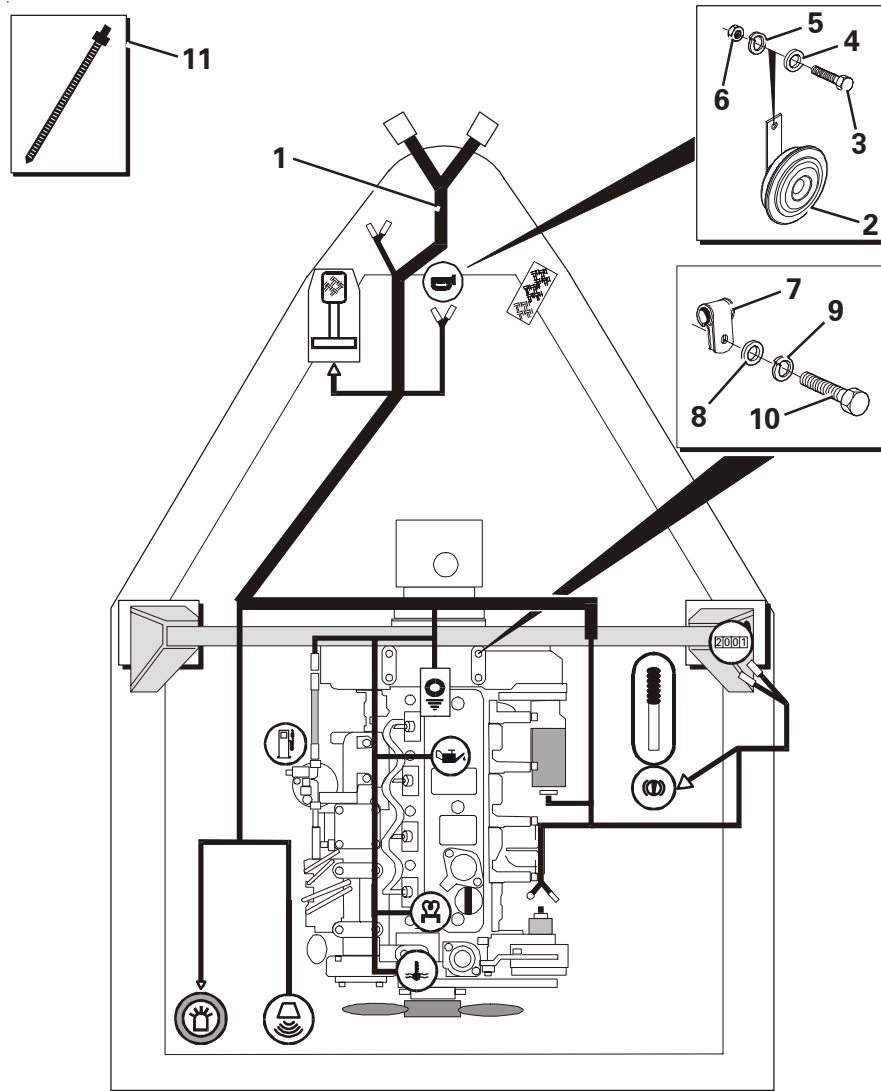
Item	Part No.	Description	Qty	U/M
1	T101127	PANEL	1.0	EA
2	T13911	FLAT WASHER	4.0	EA
3	T100315	SCREW	4.0	EA
4	T52302	HORN PUSH	1.0	EA
5	T100635	CONSOLE DECAL	1.0	EA
6	T101131	CIRCUIT BREAKER 18A	2.0	EA
7	T101133	CIRCUIT BREAKER SPLASHGUARD	2.0	EA
8	T52447	BLANKING GROMMET	4.0	EA
9	T100902	BUZZER	1.0	EA
10	T52307	IGNITION SWITCH	1.0	EA
11	T50479	STARTER SWITCH KEY	1.0	EA
12	T52311	INDEX PLATE	1.0	EA
13	T52448	MOUNTING PANEL GASKET	1.0	EA
14	T52446	SWITCH MOUNTING PANEL	2.0	EA
15	T52304	SWITCH BLANK SEAL	2.0	EA
16	T52445	BEACON SWITCH	1.0	EA
17	T52303	SWITCH BLANK	1.0	EA
18	T101128	LED MODULE	1.0	EA
19	T101135	SCREW	4.0	EA
20	T101129	RELAY	2.0	EA
21	T101134	SCREW	4.0	EA
22	T16612	PLAIN WASHER	6.0	EA
23	T101125	DASH PANEL HARNESS	1.0	EA
24	T52724	DIODE	1.0	EA
25	T16610	CH. HEAD SCREW	2.0	EA
26	T16613	NYLOC NUT	2.0	EA
27	T52725	GLOW PLUG - TIMER	1.0	EA
28	T52726	STOP SOLENOID - TIMER	1.0	EA
29	T100445	IGNITION BACKING PLATE	1.0	EA
30	T101138	DASH PANEL LINK WIRE	1.0	EA
31	T101099	DASH PANEL	1.0	EA

## STEERING ASSEMBLY



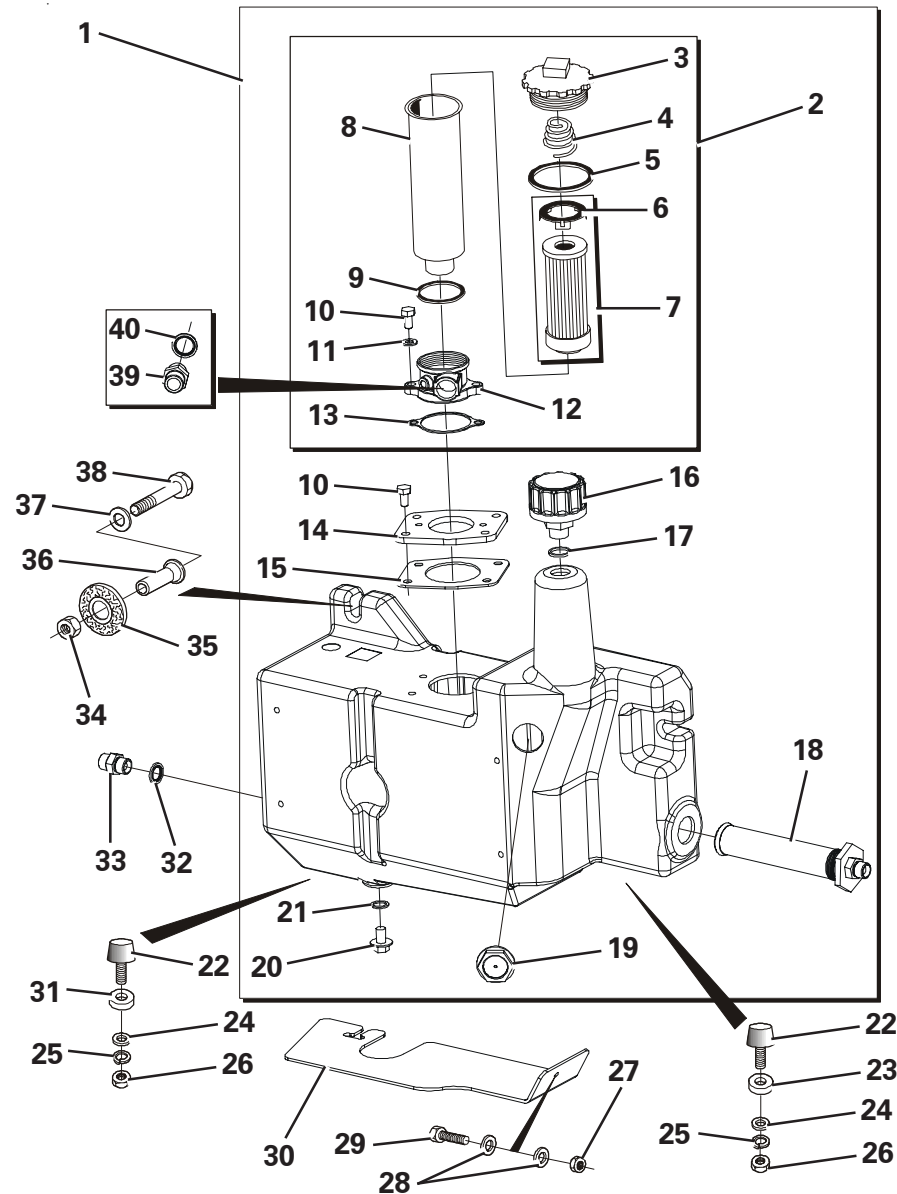
Item	Part No.	Description	Qty	U/M
1	T100496	STEERING WHEEL & CAP	1.0	EA
2	T52520	SPINNER KNOB	1.0	EA
3	T50541	CENTRE CAP	1.0	EA
4	T100690	NYLOC NUT	1.0	EA
5	T6765	WASHER	1.0	EA
6	T52517	END CAP	1.0	EA
7	T100015	STEERING COLUMN	1.0	EA
8	T7466	SET SCREW	4.0	EA
9	T13362	SPRING WASHER	4.0	EA
10	T15819	PLAIN WASHER	4.0	EA
11	T51661	SEAL KIT	1.0	EA
12	T5637	BONDED SEAL	3.0	EA
13	T100392	ADAPTOR	1.0	EA
14	T13606	ADAPTOR	1.0	EA
15	T18781	STEERING/PRIORITY VALVE	1.0	EA
16	T52378	SCREWS	2.0	EA
17	T18602	PRIORITY VALVE	1.0	EA
18	T18601	STEERING VALVE	1.0	EA
19	T51662	SEAL KIT	1.0	EA
20	T5596	HYDRAULIC SEAL	2.0	EA
21	T13936	ADAPTOR	2.0	EA
22	T11165	ADAPTOR	1.0	EA

**ENGINE HARNESS**



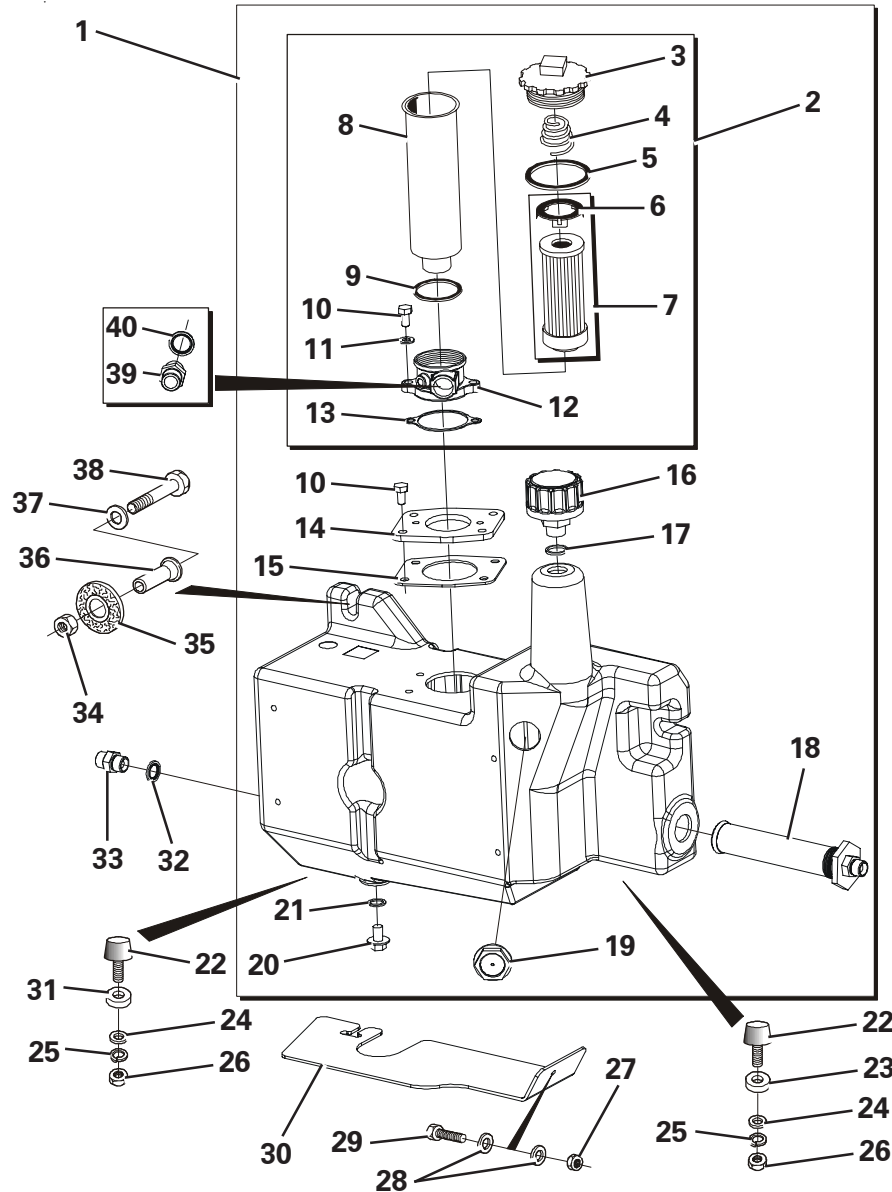
Item	Part No.	Description	Qty	U/M
1	T101121	ENGINE HARNESS	1.0	EA
2	T100017	HORN	1.0	EA
3	T10917	SET BOLT	1.0	EA
4	T13911	FLAT WASHER	1.0	EA
5	T14837	SPRING WASHER	1.0	EA
6	T10431	NUT	1.0	EA
7	T9914	HOSE CLIP	1.0	EA
8	T10734	H/DUTY WASHER	1.0	EA
9	T13362	SPRING WASHER	1.0	EA
10	T7466	SET SCREW	1.0	EA
11	T9164	NYLON CLIPS	A/R	EA

**HYDRAULIC TANK ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T101083	HYD TANK ASSY	1.0	EA
2	T101097	FILLER/FILTER	1.0	EA
3	T52624	CAP	1.0	EA
4	T52625	SPRING	1.0	EA
5	T52626	SEAL	1.0	EA
6	T52627	FILTER CLIP	1.0	EA
7	T52286	HYDRAULIC ELEMENT	1.0	EA
8	T52628	LOWER CASING	1.0	EA
9	T52629	SEAL	1.0	EA
10	T52598	FIXING BOLT	6.0	EA
11	T15819	PLAIN WASHER	2.0	EA
12	T53135	FILTER HEAD	1.0	EA
13	T53113	GASKET	1.0	EA
14	T101084	FILTER SEALING PLATE	1.0	EA
15	T52495	FILTER SEALING GASKET	1.0	EA
16	T52496	FILLER / BREATHER	1.0	EA
17	T5594	HYD SEAL	1.0	EA
18	T101240	SUCTION STRAINER	1.0	EA
19	T101085	LEVEL INDICATOR	1.0	EA
20	T52282	DRAIN PLUG	1.0	EA

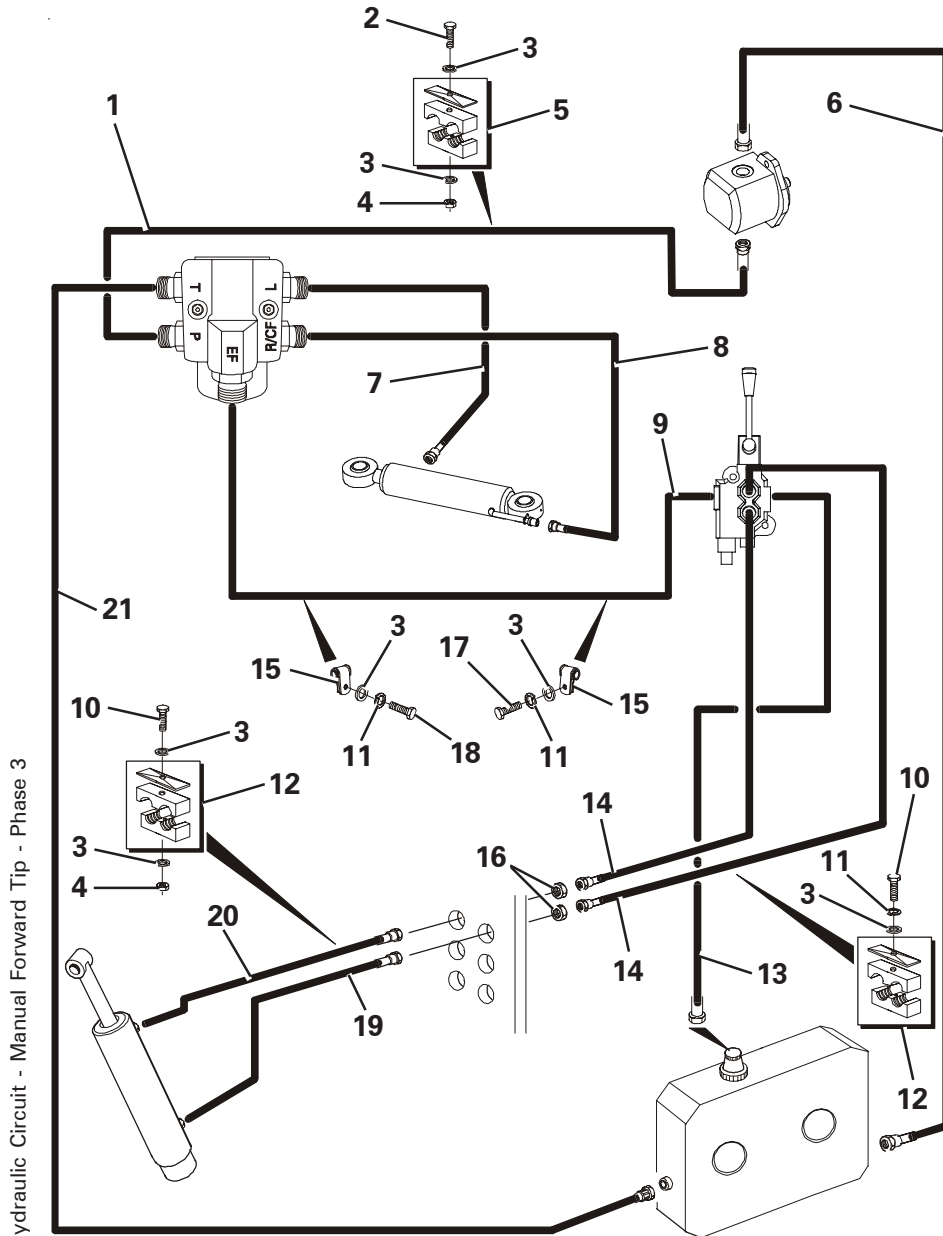
**HYDRAULIC TANK ASSEMBLY**



Item	Part No.	Description	Qty	U/M
21	T52588	FIBRE WASHER	1.0	EA
22	T100214	RUBBER BUFFER	2.0	EA
23	T101168	TANK MOUNTING SPACER	1.0	EA
24	T9345	WASHER	2.0	EA
25	T12972	SPRING WASHER	2.0	EA
26	T9775	NUT	2.0	EA
27	T16481	NYLOC NUT	1.0	EA
28	T13911	FLAT WASHER	2.0	EA
29	T16476	SET BOLT	1.0	EA
30	T101381	HYDRAULIC TANK GUARD	1.0	EA
31	T101383	TANK MOUNTING SPACER	1.0	EA
32	T5596	HYDRAULIC SEAL	1.0	EA
33	T13936	ADAPTOR	1.0	EA
34	T13064	NUT	2.0	EA
35	T100323	RUBBER BACKED WASHER	2.0	EA
36	T100372	TANK SPACER	2.0	EA
37	T10734	H/DUTY WASHER	2.0	EA
38	T17963	BOLT	2.0	EA
39	T8014	ADAPTOR	1.0	EA
40	T5594	HYD SEAL	1.0	EA

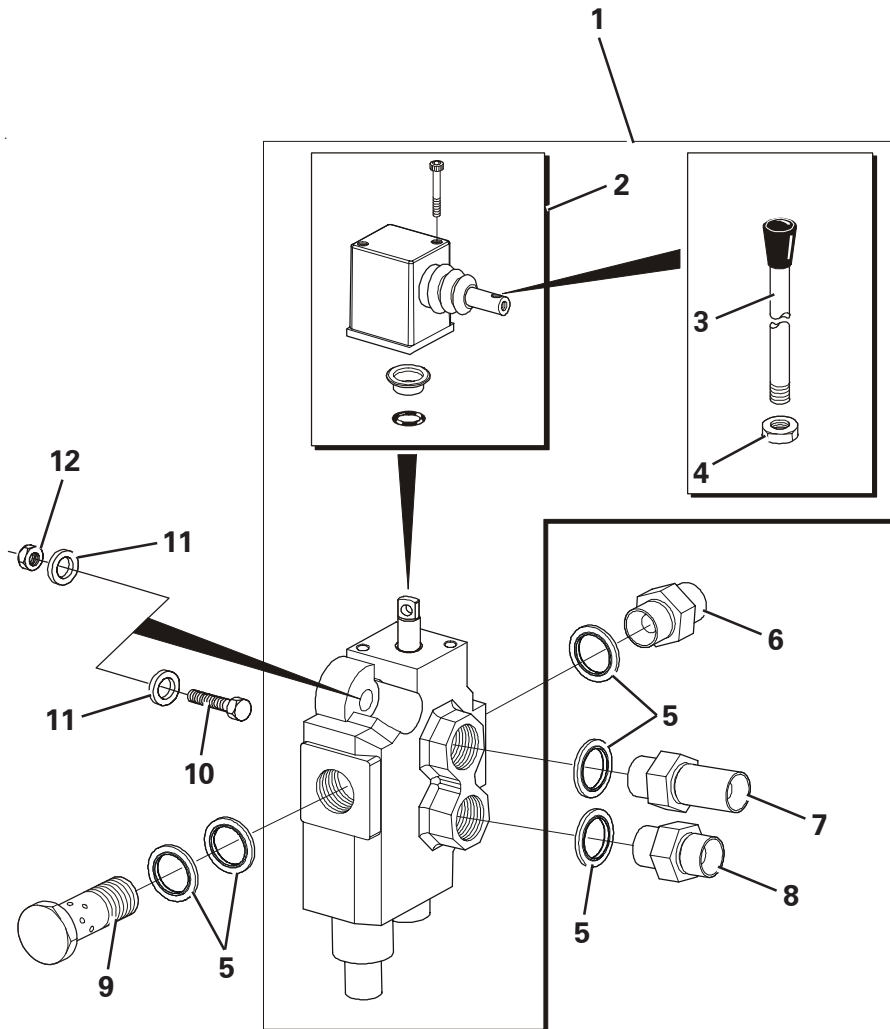
## HYDRAULIC CIRCUIT - CONTROLS

Item	Part No.	Description	Qty	U/M
1	T101212	HOSE	1.0	EA
2	T17157	BOLT	1.0	EA
3	T12973	WASHER	7.0	EA
4	T13457	NYLOC NUT	2.0	EA
5	T101389	PIPE CLAMP	1.0	EA
6	T101211	HOSE	1.0	EA
7	T101276	HOSE	1.0	EA
8	T101214	HOSE	1.0	EA
9	T101225	HOSE	1.0	EA
10	T100353	BOLT	2.0	EA
11	T12972	SPRING WASHER	3.0	EA
12	T100564	PIPE CLAMP	2.0	EA
13	T101226	HOSE	1.0	EA
14	T101216	HOSE	2.0	EA
15	T9914	HOSE CLIP	2.0	EA
16	T7882	LOCKNUT	2.0	EA
17	T7465	SCREW	1.0	EA
18	T11673	BOLT	1.0	EA
19	T101221	HOSE	1.0	EA
20	T101222	HOSE	1.0	EA
21	T101215	HOSE	1.0	EA



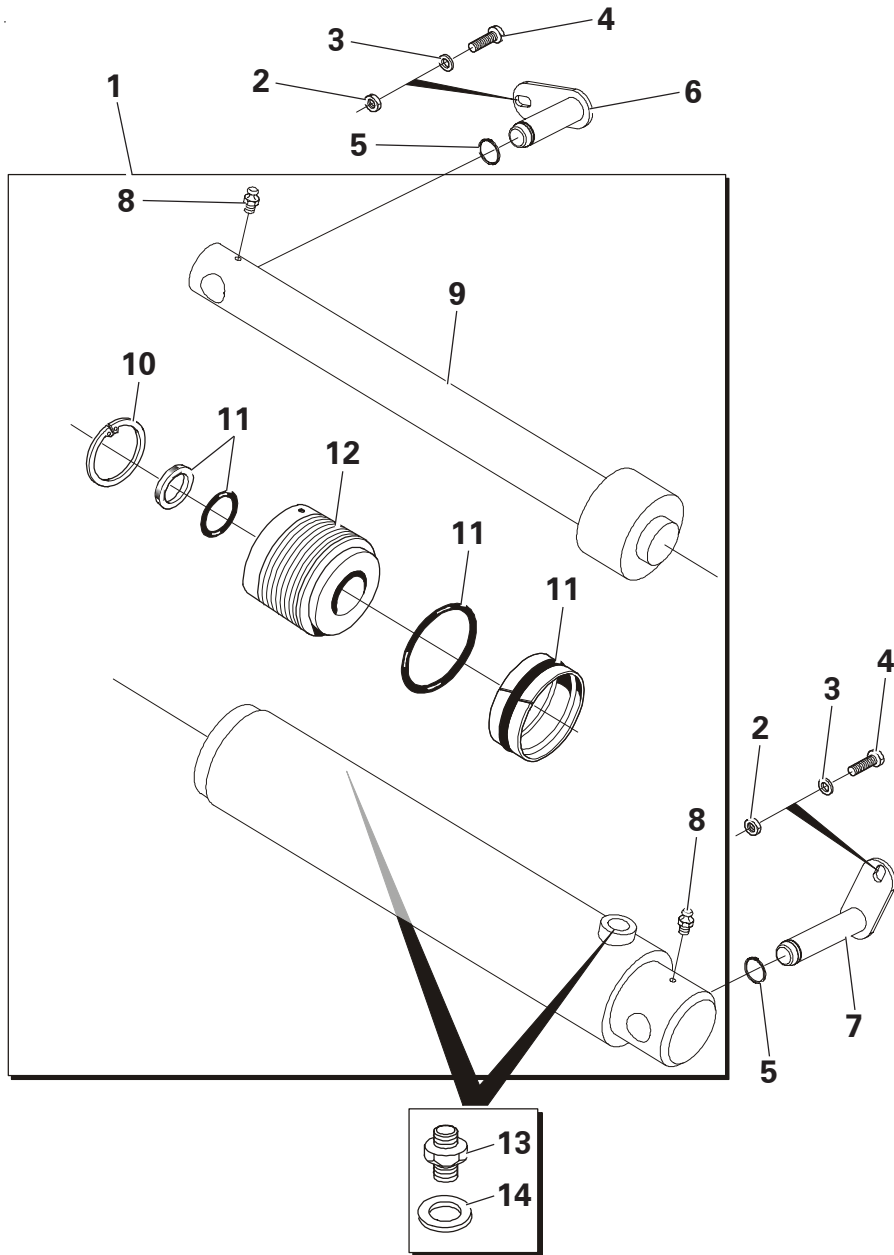
Hydraulic Circuit - Manual Forward Tip - Phase 3

**TIPPING VALVE ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T101114	TIPPING VALVE ASSY	1.0	EA
2	T53141	LEVER CAP	1.0	EA
3	T101435	LEVER	1.0	EA
4	T9775	NUT	1.0	EA
5	T5637	BONDED SEAL	5.0	EA
6	T101242	ADAPTOR	1.0	EA
7	T100392	ADAPTOR	1.0	EA
8	T13606	ADAPTOR	1.0	EA
9	T52793	BANJO BOLT	1.0	EA
10	T14277	BOLT	2.0	EA
11	T12973	PLAIN WASHER	4.0	EA
12	T13457	NYLOC NUT	2.0	EA

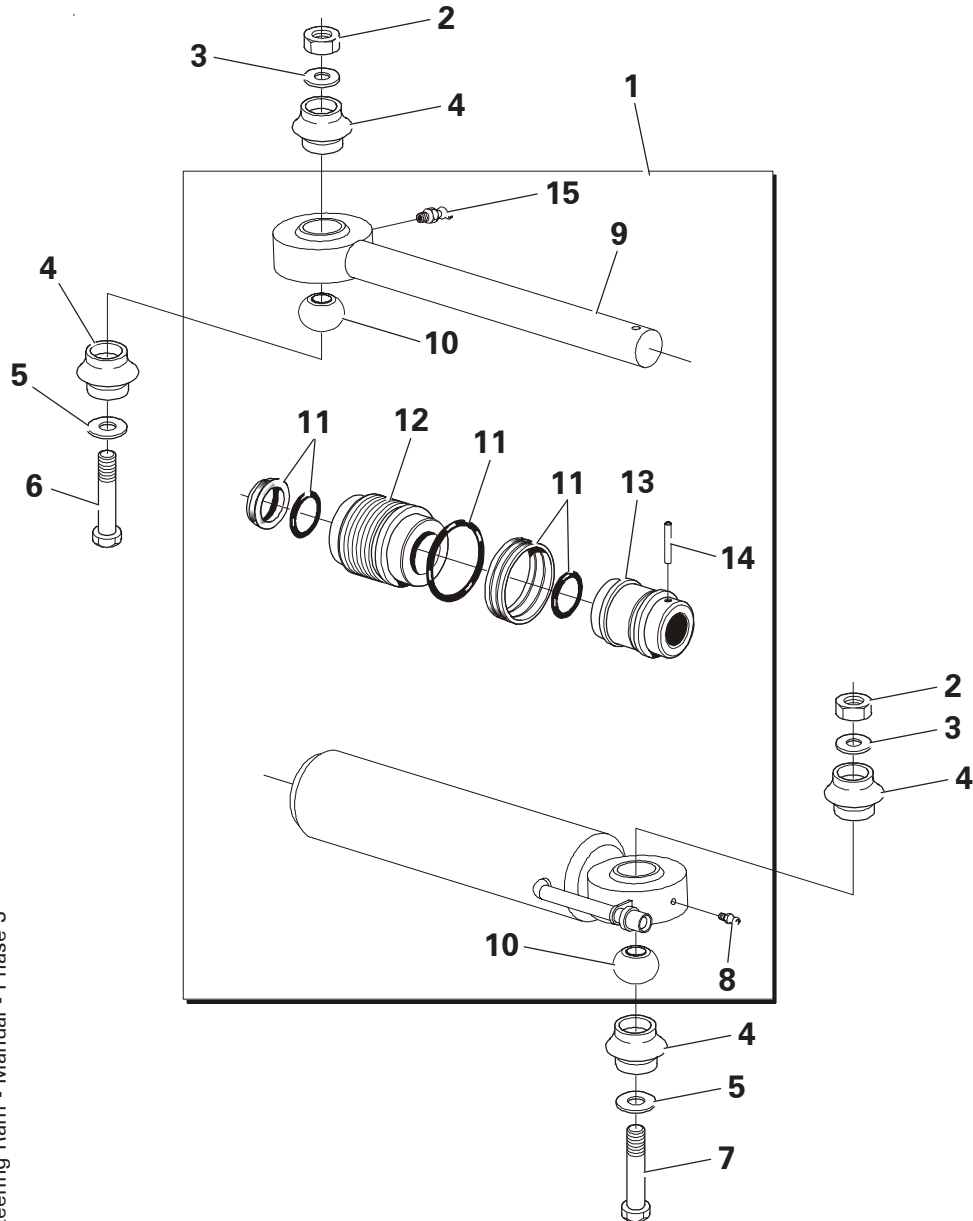
**TIPPING RAM ASSEMBLY**



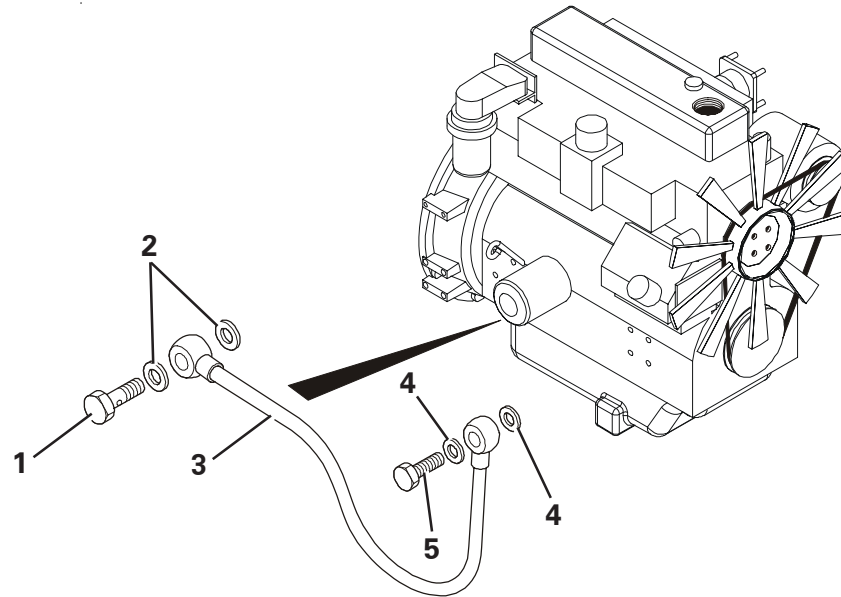
Item	Part No.	Description	Qty	U/M
1	T100965	TIPPING RAM	1.0	EA
2	T13064	NUT	2.0	EA
3	T17184	HEAVY DUTY WASHER	2.0	EA
4	T16505	SET BOLT	2.0	EA
5	T8219	CIRCLIP	2.0	EA
6	T100994	PIVOT PIN	1.0	EA
7	T100993	RAM PIN LOWER	1.0	EA
8	T13454	GREASE NIPPLE	2.0	EA
9	T53121	ROD ASSY	1.0	EA
10	T1624	SNAP RING	1.0	EA
11	T50421	SEAL KIT	1.0	EA
12	T50418	HEAD BUSH	1.0	EA
13	T13606	ADAPTOR	2.0	EA
14	T5637	BONDED SEAL	2.0	EA

**STEERING RAM ASSEMBLY**

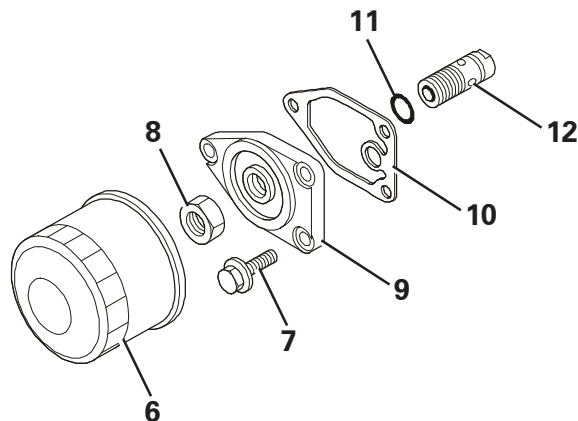
Item	Part No.	Description	Qty	U/M
1	T101110	STEER RAM	1.0	EA
2	T10331	LOCKNUT	2.0	EA
3	T7695	WASHER	2.0	EA
4	T101038	RAM DUST SEAL	4.0	EA
5	T8327	WASHER	2.0	EA
6	T101119	PIVOT BOLT	1.0	EA
7	T101311	PIVOT BOLT	1.0	EA
8	T13454	GREASE NIPPLE	1.0	EA
9	T53122	ROD ASSY	1.0	EA
10	T2162	SPHERICAL BEARING	2.0	EA
11	T53123	SEAL KIT	1.0	EA
12	T50492	HEAD BUSH	1.0	EA
13	T50491	PISTON	1.0	EA
14	T51588	TENSION PIN	1.0	EA
15	T16587	GREASE NIPPLE	1.0	EA



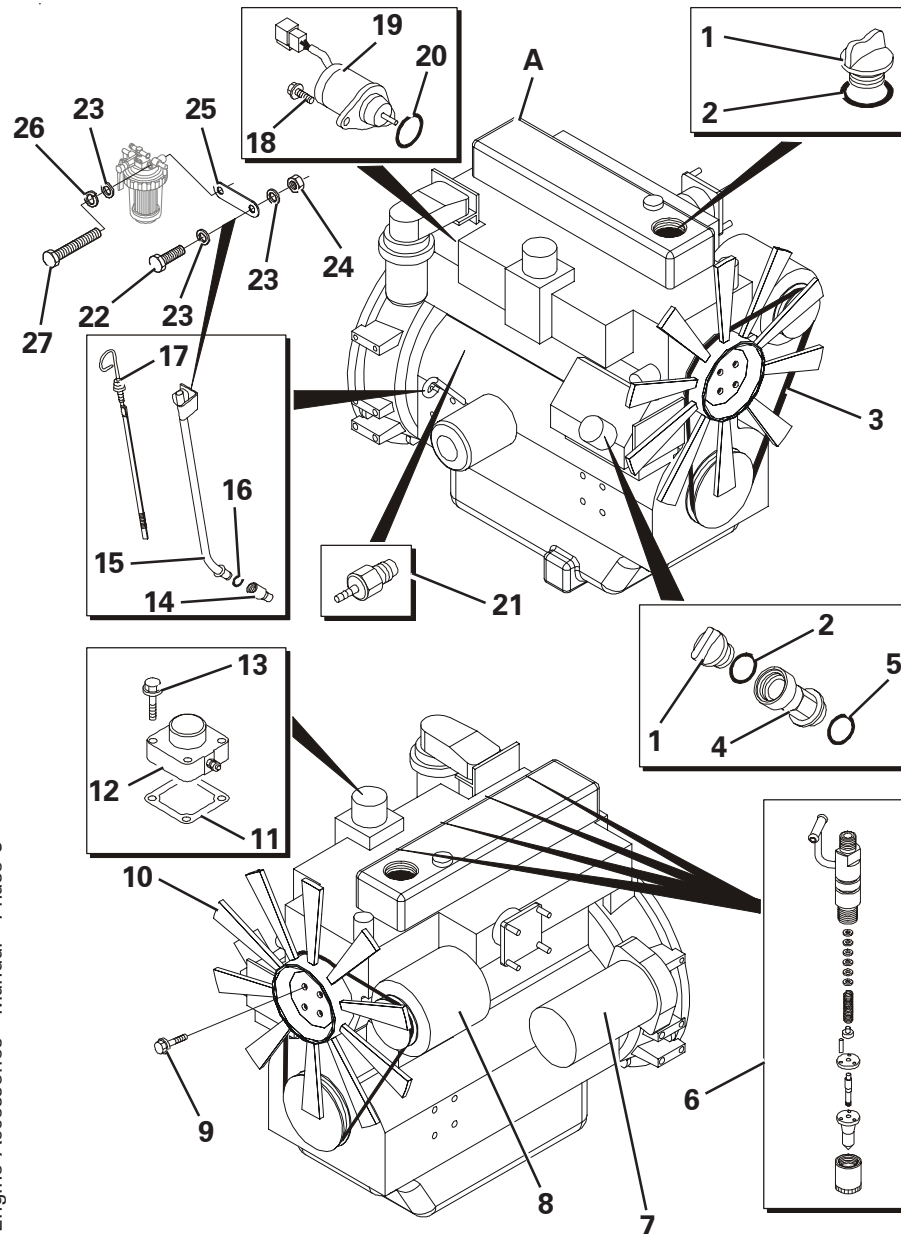
**ENGINE - OIL FILTER ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T53038	BOLT	1.0	EA
2	T53039	WASHER	2.0	EA
3	T53142	PIPE	1.0	EA
4	T53041	WASHER	2.0	EA
5	T53042	BOLT	1.0	EA
6	T52686	OIL FILTER	1.0	EA
7	T53043	BOLT	1.0	EA
8	T53044	NUT	1.0	EA
9	T53045	BRACKET	1.0	EA
10	T53046	GASKET	1.0	EA
11	T52901	O RING	1.0	EA
12	T53047	BOLT	1.0	EA

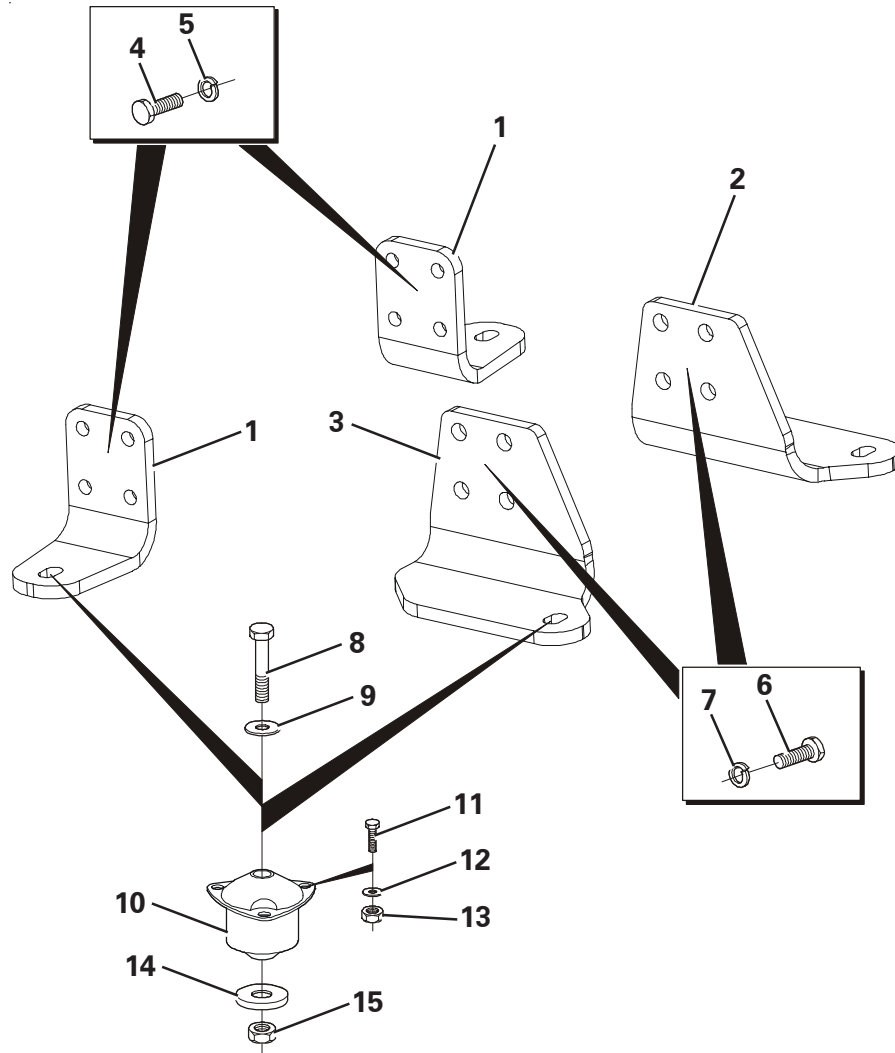


## ENGINE - ACCESSORIES



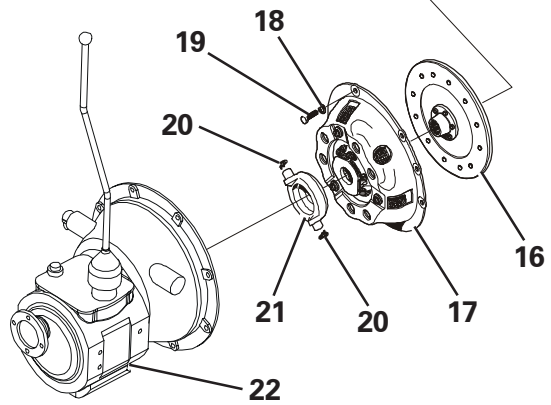
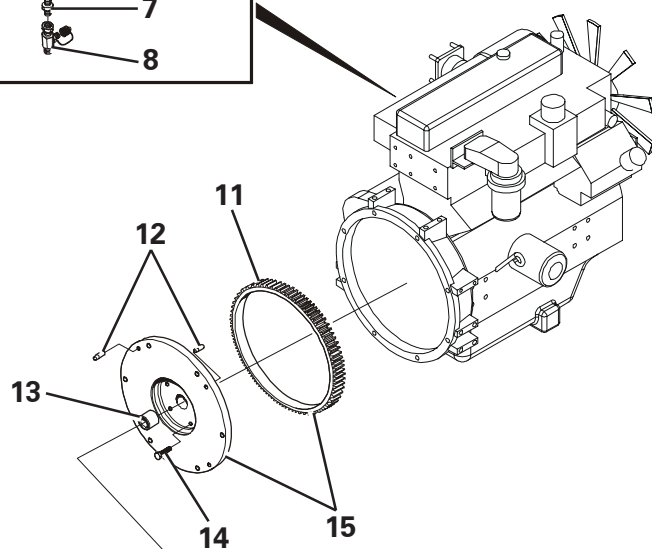
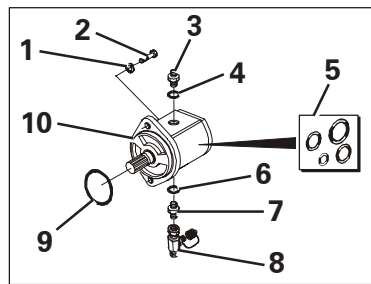
Item	Part No.	Description	Qty	U/M
A	T101007	ENGINE	1.0	EA
1	T52816	CAP	2.0	EA
2	T52817	O RING	2.0	EA
3	T53146	V-BELT	1.0	EA
4	T53144	PIPE ASSY	1.0	EA
5	T53143	O RING	1.0	EA
6	T53149	VALVE ASSY F/INJECT	4.0	EA
7	T53150	STARTER MOTOR	1.0	EA
8	T52690	GENERATOR	1.0	EA
9	T53148	BOLT	4.0	EA
10	T53147	FAN	1.0	EA
11	T52824	GASKET	1.0	EA
12	T52823	HEATER	1.0	EA
13	T52825	BOLT	4.0	EA
14	T52830	GUIDE	1.0	EA
15	T53145	GUIDE DIPSTICK	1.0	EA
16	T52829	O RING	1.0	EA
17	T52826	DIPSTICK	1.0	EA
18	T52835	BOLT	2.0	EA
19	T52833	STOP SOLENOID	1.0	EA
20	T52834	O RING	1.0	EA
21	T52832	OIL PRESSURE SWITCH	1.0	EA
22	T11673	SET BOLT	1.0	EA
23	T12973	PLAIN WASHER	3.0	EA
24	T13457	NYLOC NUT	1.0	EA
25	T101303	PLATE	1.0	EA
26	T12972	SPRING WASHER	1.0	EA
27	T16666	BOLT	1.0	EA

**ENGINE MOUNTINGS**



Item	Part No.	Description	Qty	U/M
1	T101026	FRONT ENGINE MOUNT	2.0	EA
2	T100988	REAR ENGINE MOUNT RH	1.0	EA
3	T100990	REAR ENGINE MOUNT LH	1.0	EA
4	T7466	SET SCREW	8.0	EA
5	T13362	SPRING WASHER	8.0	EA
6	T14077	BOLT	8.0	EA
7	T14080	SPRING WASHER	8.0	EA
8	T14819	BOLT	4.0	EA
9	T14748	WASHER	4.0	EA
10	T14564	ENGINE MOUNT	4.0	EA
11	T12694	SET SCREW	12.0	EA
12	T12973	PLAIN WASHER	12.0	EA
13	T19007	PHILIDAS NUT	12.0	EA
14	T9046	WASHER	4.0	EA
15	T14283	PHILIDAS NUT	4.0	EA

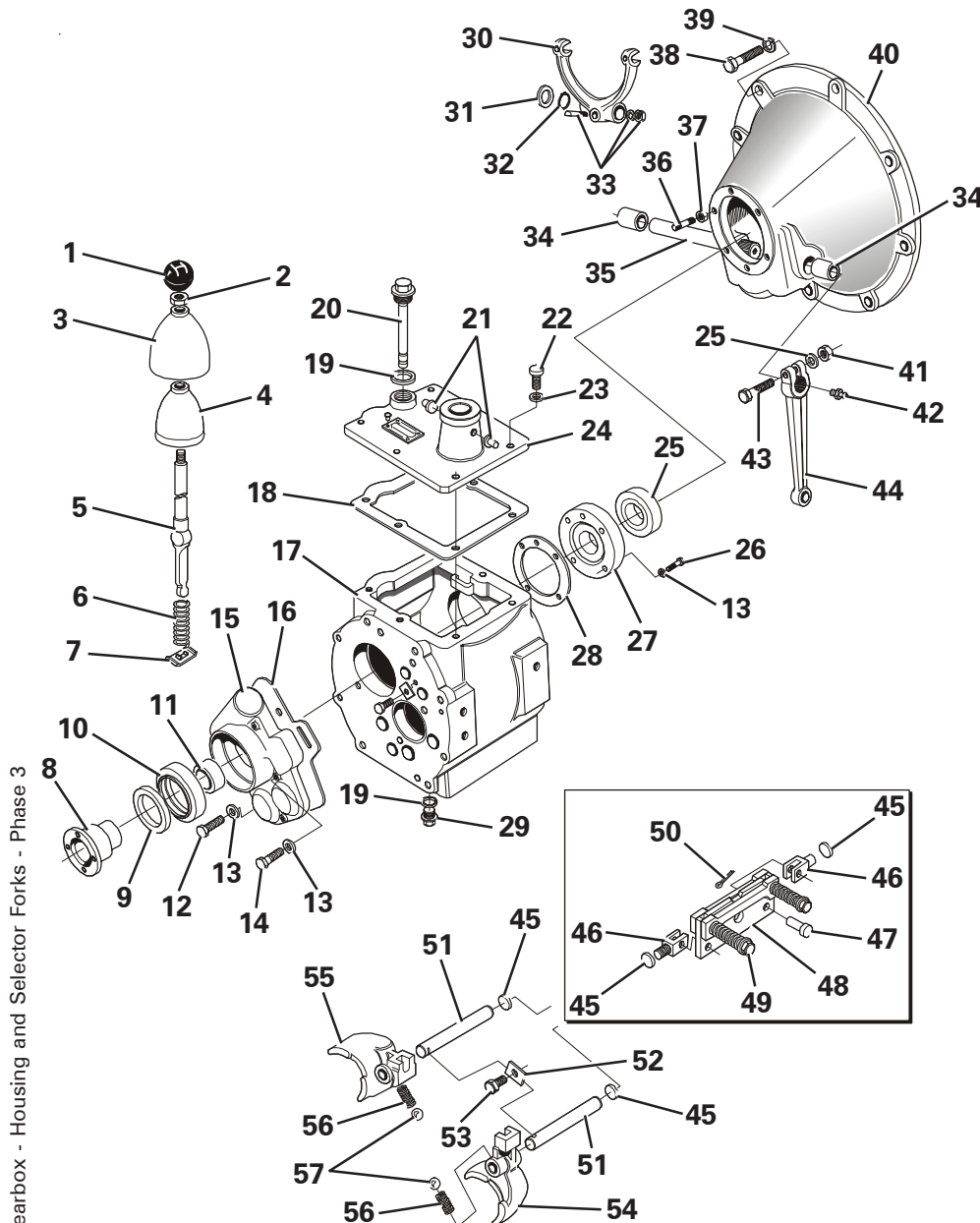
**CLUTCH ASSEMBLY & HYD. PUMP**



Item	Part No.	Description	Qty	U/M
1	T13362	SPRING WASHER	2.0	EA
2	T17969	CAPHEAD SET SCREW	2.0	EA
3	T101609	ADAPTOR	1.0	EA
4	T5594	HYD SEAL	1.0	EA
5	T52643	SEAL KIT	1.0	EA
6	T5596	HYDRAULIC SEAL	1.0	EA
7	T13936	ADAPTOR	1.0	EA
8	T18008	PRESSURE TEST POINT ADAPTOR	1.0	EA
9	T52891	O RING	1.0	EA
10	T101140	GEAR PUMP	1.0	EA
11	T52837	RING GEAR	1.0	EA
12	T5982	DOWEL	2.0	EA
13	T4520	BUSH	1.0	EA
14	T52838	BOLT	6.0	EA
15	T53114	FLYWHEEL	1.0	EA
16*	T101729	DRIVE PLATE	1.0	EA
17	T12171	CLUTCH COVER	1.0	EA
18	T12972	SPRING WASHER	6.0	EA
19	T6784	SET SCREW	6.0	EA
20	T7095	SPRING RETAINERS	2.0	EA
21	T6551	RELEASE BEARING	1.0	EA
22	T101029	GEARBOX	1.0	EA

## G/BOX - HOUSING & SELECTOR FORKS

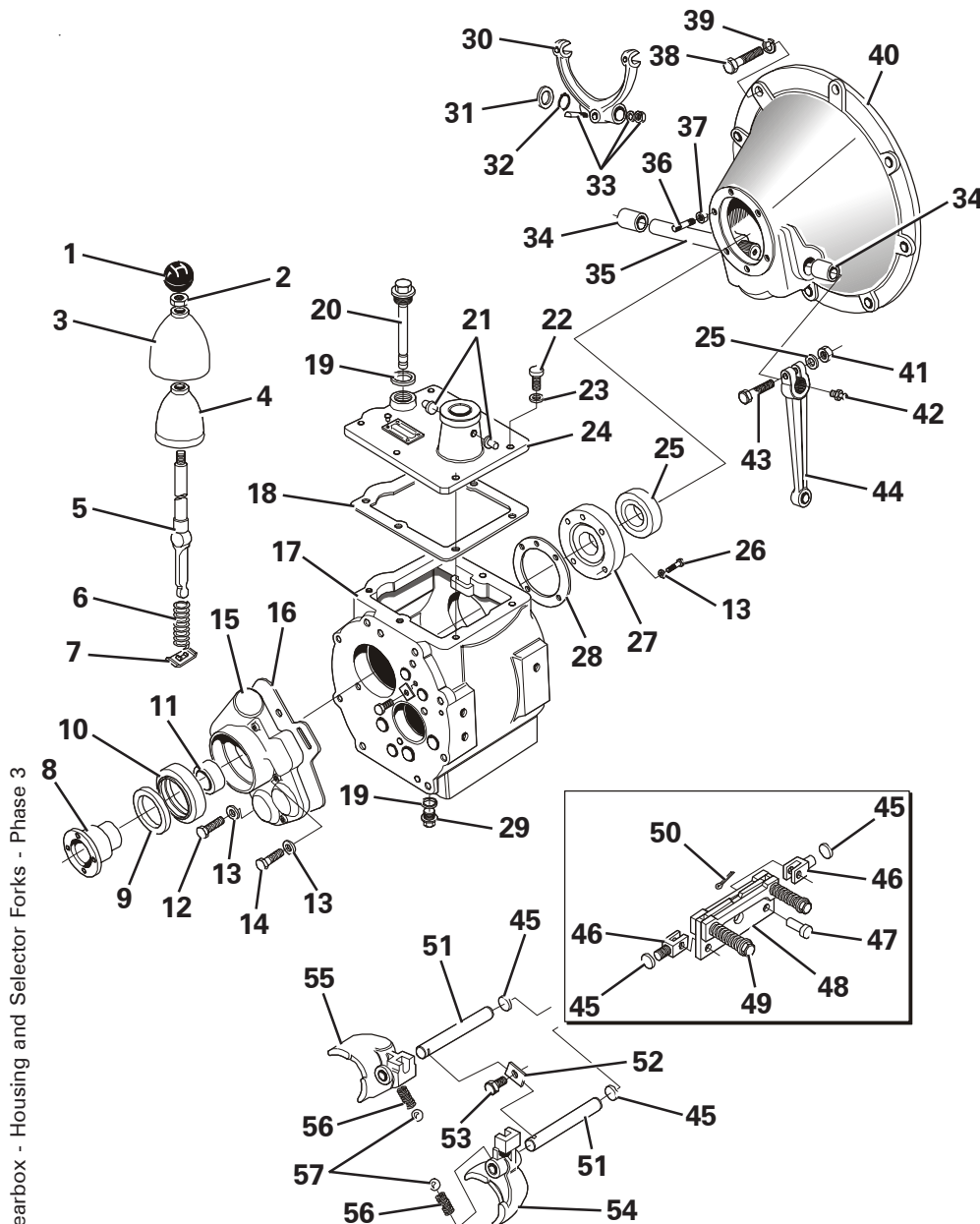
Item	Part No.	Description	Qty	U/M
1	T4547	KNOB	1.0	EA
2	T7727	LOCKNUT	1.0	EA
3	T4485	COVER	1.0	EA
4	T4549	COVER	1.0	EA
5	T53139	GEAR LEVER	1.0	EA
6	T4486	SPRING	1.0	EA
7	T4508	RETAINER PLATES	1.0	EA
8	T4200	COUPLING	1.0	EA
9	T4253	DUST EXCLUDER	1.0	EA
10	T4531	OILSEAL	1.0	EA
11	T4544	SPACER	1.0	EA
12	T6731	BOLT	3.0	EA
13	T3499	NYLITE WASHER	9.0	EA
14	T4327	BOLT	2.0	EA
15	T4564	REAR COVER	1.0	EA
16	T4529	JOINT	1.0	EA
17	T3497	GEAR CASE	1.0	EA
18	T4530	JOINT	1.0	EA
19	T4467	WASHER	2.0	EA
20	T50438	DIPSTICK	1.0	EA
21	T4507	PAD GEAR LEVER	2.0	EA
22	T4334	SCREW	6.0	EA
23	T53137	WASHER	6.0	EA
24	T4519	TOP COVER	1.0	EA
25	T4539	OILSEAL	1.0	EA
26	T4327	BOLT	6.0	EA
27	T4551	FRONT COVER	1.0	EA
28	T4528	JOINT	1.0	EA
29	T4248	PLUG	1.0	EA



Gearbox - Housing and Selector Forks - Phase 3

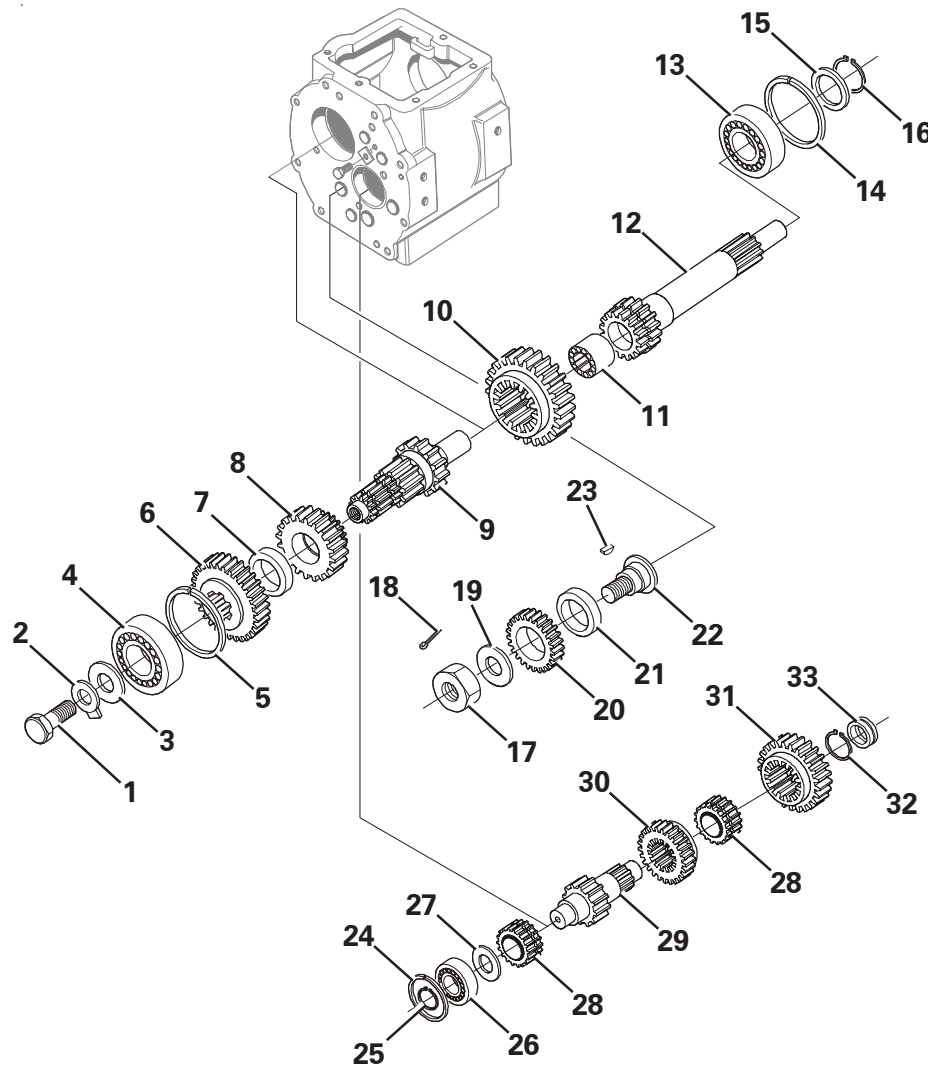
## G/BOX - HOUSING & SELECTOR FORKS

Item	Part No.	Description	Qty	U/M
30	T4430	CLUTCH FORK	1.0	EA
31	T4481	WASHER	1.0	EA
32	T4468	CIRCLIP	1.0	EA
33	T4429	COTTER PIN-NUT & WASHER	1.0	EA
34	T4403	BUSH	2.0	EA
35	T4482	CROSS SHAFT	1.0	EA
36	T4525	STUD CLUTCH	6.0	EA
37	T4307	NUT	6.0	EA
38	T7466	SET SCREW	8.0	EA
39	T13362	SPRING WASHER	8.0	EA
40	T4483	CLUTCH HOUSING	1.0	EA
41	T7717	NUT	1.0	EA
42	T6673	GREASE NIPPLE	2.0	EA
43	T7977	BOLT	1.0	EA
44	T4428	CLUTCH LEVER	1.0	EA
45	T4415	SEALING DISC	4.0	EA
46	T4514	STUD SHORT	2.0	EA
47	T4512	CLEVIS PIN	2.0	EA
48	T50375	INTERLOCK PLATE	1.0	EA
49	T50374	SAFETY PLATE ASSY	1.0	EA
50	T6744	SPLIT PIN	2.0	EA
51	T4546	SELECTOR SHAFT	2.0	EA
52	T4545	LOCKING STRIP	1.0	EA
53	T3498	SCREW	1.0	EA
54	T4480	FORK 1ST/REVERSE	1.0	EA
55	T4479	FORK 2ND/3RD	1.0	EA
56	T4420	DETENT SPRING	1.0	EA
57	T4464	BEARING	1.0	EA



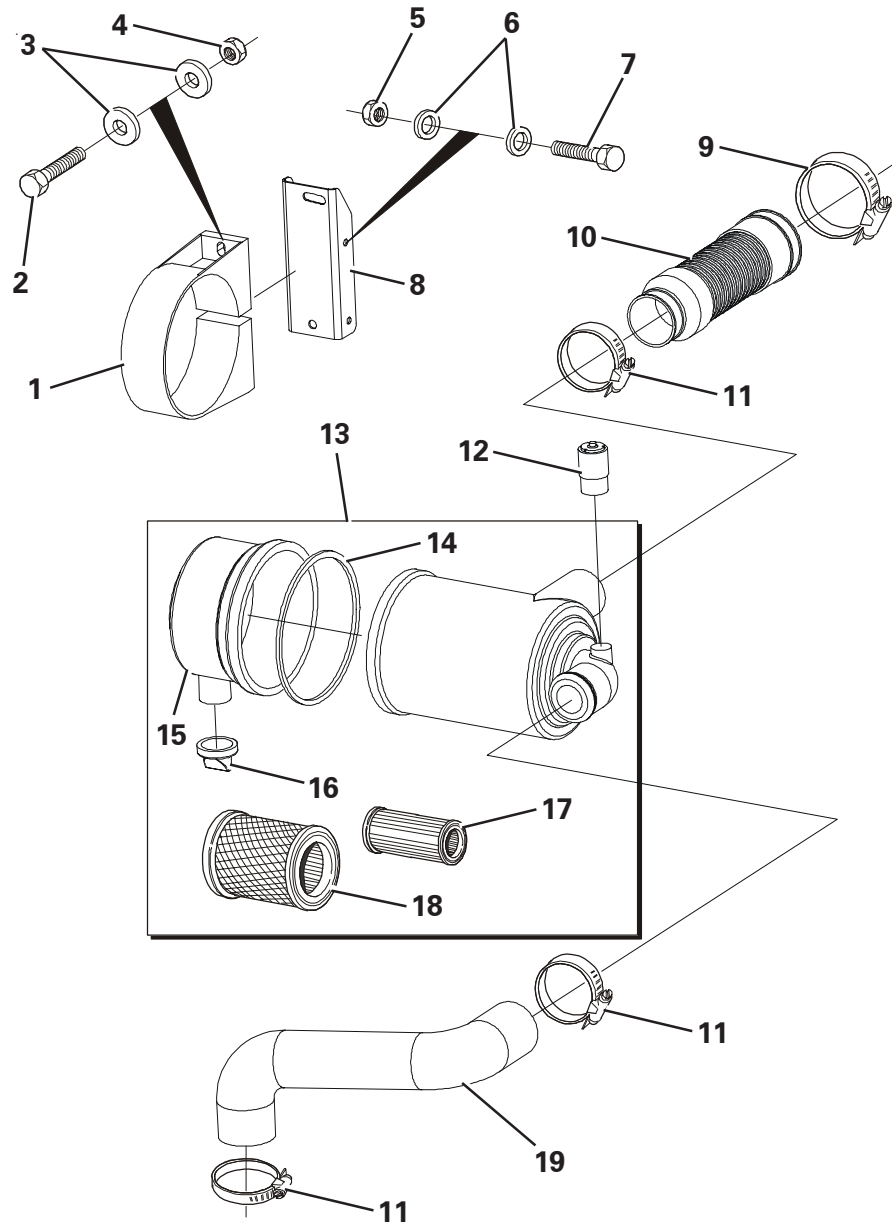
Gearbox - Housing and Selector Forks - Phase 3

## GEARBOX - INTERNAL



Item	Part No.	Description	Qty	U/M
1	T4328	BOLT	1.0	EA
2	T4443	LOCK WASHER	1.0	EA
3	T3646	WASHER	1.0	EA
4	T4441	BEARING	1.0	EA
5	T4438	SNAP RING	1.0	EA
6	T4562	OUTPUT GEAR	1.0	EA
7	T4550	SPACER	1.0	EA
8	T4559	SPEED GEAR	1.0	EA
9	T4476	MAINSHAFT	1.0	EA
10	T4557	1ST SPEED GEAR	1.0	EA
11	T4477	BEARING	1.0	EA
12	T4555	PRIMARY SHAFT	1.0	EA
13	T4543	BEARING	1.0	EA
14	T3486	SNAP RING	1.0	EA
15	T4526	BEARING SPACER	1.0	EA
16	T4440	CIRCLIP	1.0	EA
17	T4309	NUT	1.0	EA
18	T6745	SPLIT PIN	1.0	EA
19	T4535	WASHER	1.0	EA
20	T4561	REVERSE PINION	1.0	EA
21	T4533	BUSH	1.0	EA
22	T4553	SHAFT REVERSE PIN	1.0	EA
23	T4518	KEY	1.0	EA
24	T4096	SNAP RING	1.0	EA
25	T3418	CIRCLIP	1.0	EA
26	T4542	BEARING	1.0	EA
27	T4548	BEARING SPACER	1.0	EA
28	T4558	REVERSE SPEED GEAR	2.0	EA
29	T3109	LAYSHAFT	1.0	EA
30	T4556	2ND SLIDING GEAR	1.0	EA
31	T4487	1ST REDUCTION GEAR	1.0	EA
32	T2379	CIRCLIP	1.0	EA
33	T3110	NEEDLE ROLLER BEARING	1.0	EA

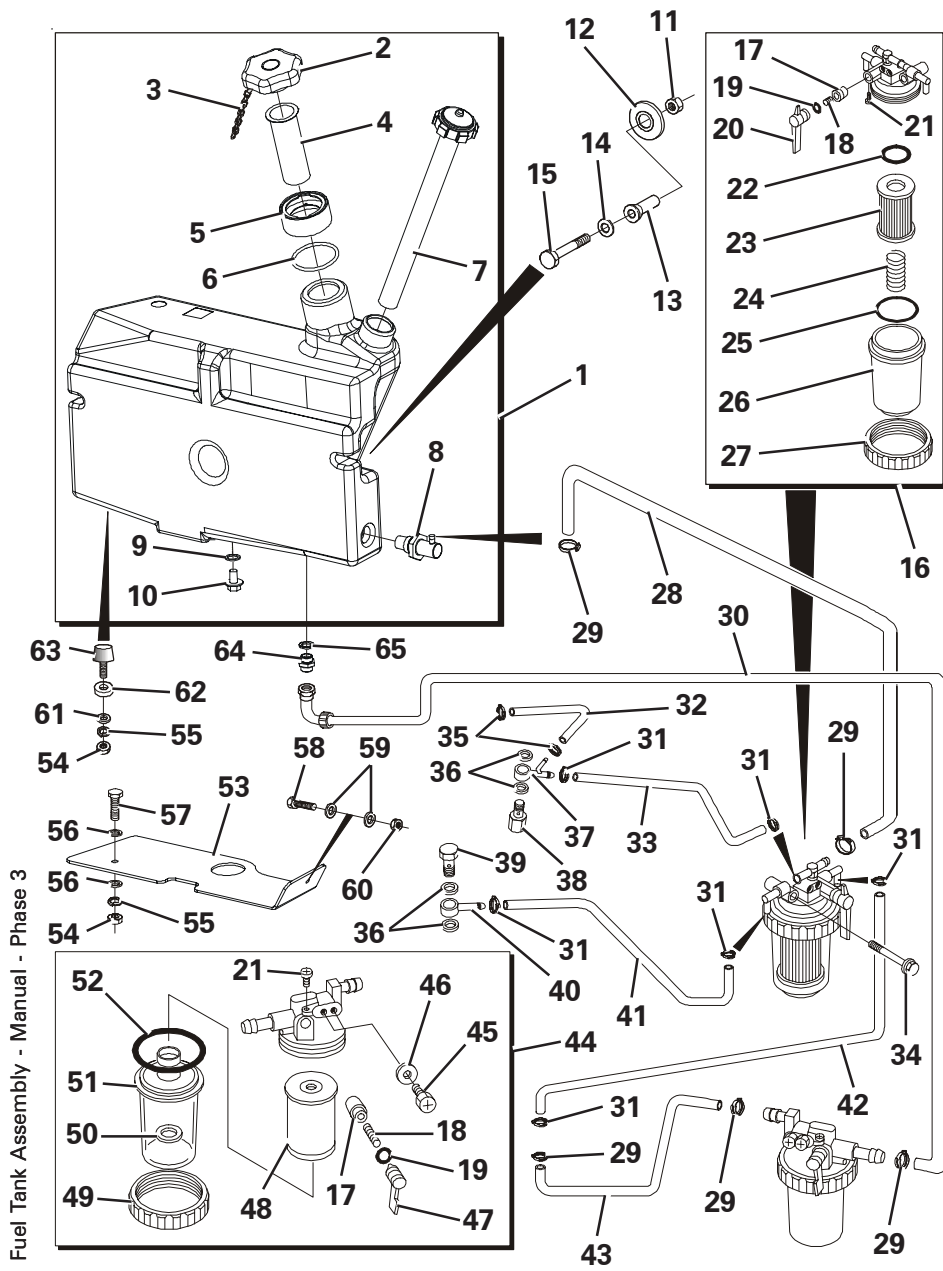
**AIR CLEANER ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T18422	AIR CLEANER BRACKET	1.0	EA
2	T14152	BOLT	2.0	EA
3	T9345	WASHER	4.0	EA
4	T13457	NYLOC NUT	2.0	EA
5	T16481	NYLOC NUT	3.0	EA
6	T13911	FLAT WASHER	6.0	EA
7	T16477	BOLT	3.0	EA
8	T101152	AIR CLEANER MTG BRKT	1.0	EA
9	T7540	JUBILEE CLIP	1.0	EA
10	T101182	FLEXIBLE AIR CLEANER HOSE	1.0	EA
11	T7872	JUBILEE CLIP	3.0	EA
12	T100282	RESTRICTION INDICATOR	1.0	EA
13	T101137	AIR CLEANER	1.0	EA
14	T53116	GASKET	1.0	EA
15	T53115	COVER ASSY	1.0	EA
16	T53117	VALVE	1.0	EA
17	T53119	INNER ELEMENT	1.0	EA
18	T53118	OUTER ELEMENT	1.0	EA
19	T101144	FLEXIBLE AIR CLEANER HOSE	1.0	EA

## FUEL TANK ASSEMBLY

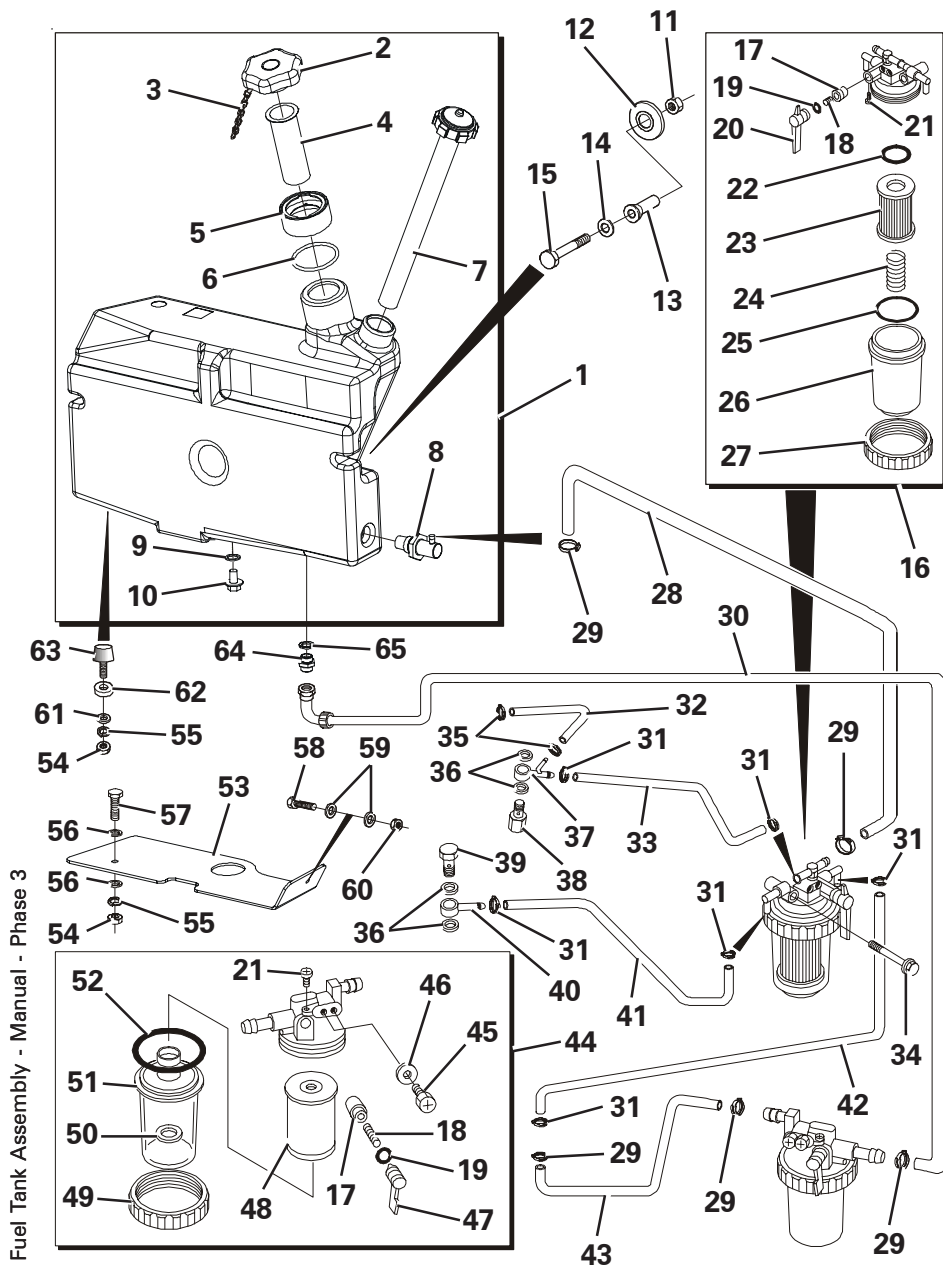
Item	Part No.	Description	Qty	U/M
1	T101081	FUEL TANK ASSY	1.0	EA
2	T52283	FUEL FILLER CAP	1.0	EA
3	T52437	FILLER CAP CHAIN	1.0	EA
4	T52284	STRAINER	1.0	EA
5	T52543	FILLER CAP COLLAR	1.0	EA
6	T52589	O RING	1.0	EA
7	T52498	LEVEL GAUGE	1.0	EA
8	T52372	FUEL RETURN ELBOW	1.0	EA
9	T52588	FIBRE WASHER	1.0	EA
10	T52282	DRAIN PLUG	1.0	EA
11	T13064	NUT	2.0	EA
12	T100323	RUBBER BACKED WASHER	2.0	EA
13	T100372	TANK SPACER	2.0	EA
14	T10734	H/DUTY WASHER	2.0	EA
15	T17963	BOLT	2.0	EA
16	T52903	FUEL STRAINER ASSY	1.0	EA
17	T52887	VALVE	2.0	EA
18	T52888	SPRING	2.0	EA
19	T52829	O RING	2.0	EA
20	T52902	LEVER	1.0	EA
21	T52884	SCREW	2.0	EA
22	T52901	O RING	1.0	EA
23	T52687	ELEMENT FUEL OIL	1.0	EA
24	T52900	SPRING	1.0	EA
25	T52899	O RING	1.0	EA
26	T52898	STRAINER CUP	1.0	EA
27	T52897	RING	1.0	EA
28	T101218	HOSE ASSY	1.0	EA
29	T100691	HOSE CLIP	5.0	EA
30	T101505	FUEL HOSE	1.0	EA
31	T52882	CLAMP	6.0	EA
32	T52876	PIPE	1.0	EA
33	T52881	PIPE	1.0	EA



Fuel Tank Assembly - Manual - Phase 3

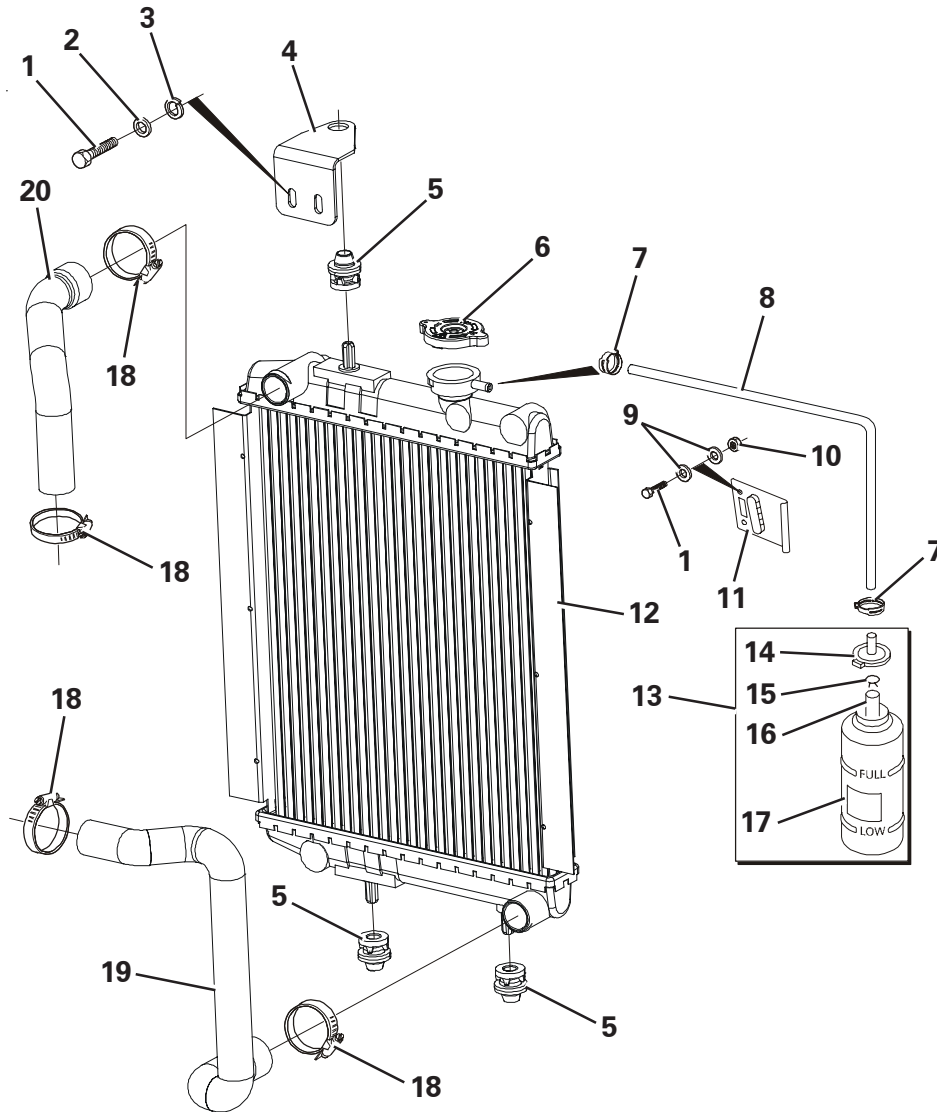
## FUEL TANK ASSEMBLY

Item	Part No.	Description	Qty	U/M
34	T52904	BOLT	1.0	EA
35	T52877	CLAMP	2.0	EA
36	T52879	SEAL WASHER	4.0	EA
37	T52878	JOINT	1.0	EA
38	T52880	VALVE ASSY	1.0	EA
39	T52883	BOLT	1.0	EA
40	T52906	JOINT	1.0	EA
41	T52905	PIPE	1.0	EA
42	T52907	PIPE	1.0	EA
43	T100745	FUEL HOSE	1.0	EA
44	T52896	WATER SEPERATOR ASSY	1.0	EA
45	T52886	PLUG	2.0	EA
46	T52885	NYLON GASKET	2.0	EA
47	T52890	HANDLE	1.0	EA
48	T52691	SCREEN FILTER	1.0	EA
49	T52895	RING	1.0	EA
50	T52894	FLOAT	1.0	EA
51	T52893	STRAINER CUP	1.0	EA
52	T52892	O RING	1.0	EA
53	T101382	FUEL TANK GUARD	1.0	EA
54	T9775	NUT	3.0	EA
55	T12972	SPRING WASHER	3.0	EA
56	T12973	PLAIN WASHER	2.0	EA
57	T14277	BOLT	1.0	EA
58	T16476	SET BOLT	1.0	EA
59	T13911	FLAT WASHER	2.0	EA
60	T16481	NYLOC NUT	1.0	EA
61	T9345	WASHER	2.0	EA
62	T101168	TANK MOUNTING SPACER	2.0	EA
63	T100214	RUBBER BUFFER	2.0	EA
64	T12118	ADAPTOR	1.0	EA
65	T10940	HYDRAULIC WASHER	1.0	EA



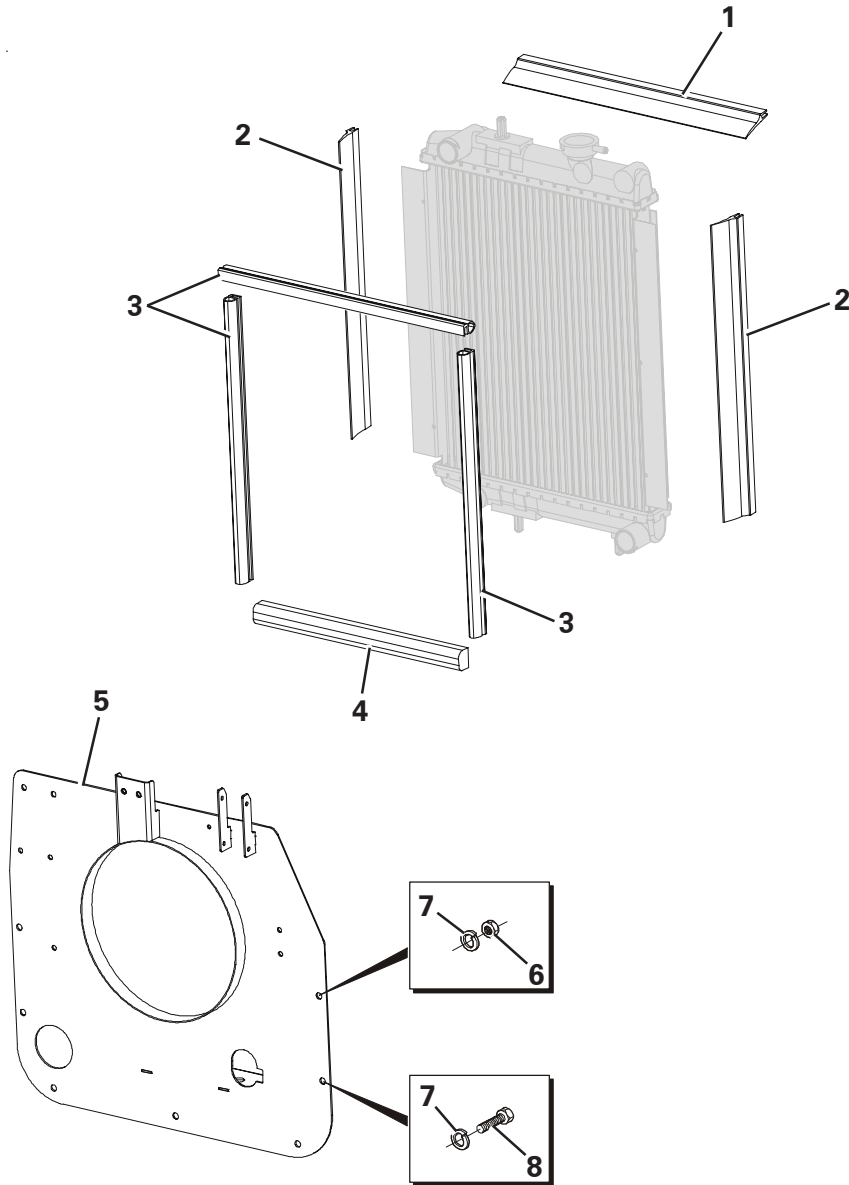
Fuel Tank Assembly - Manual - Phase 3

**RADIATOR & FIXINGS**



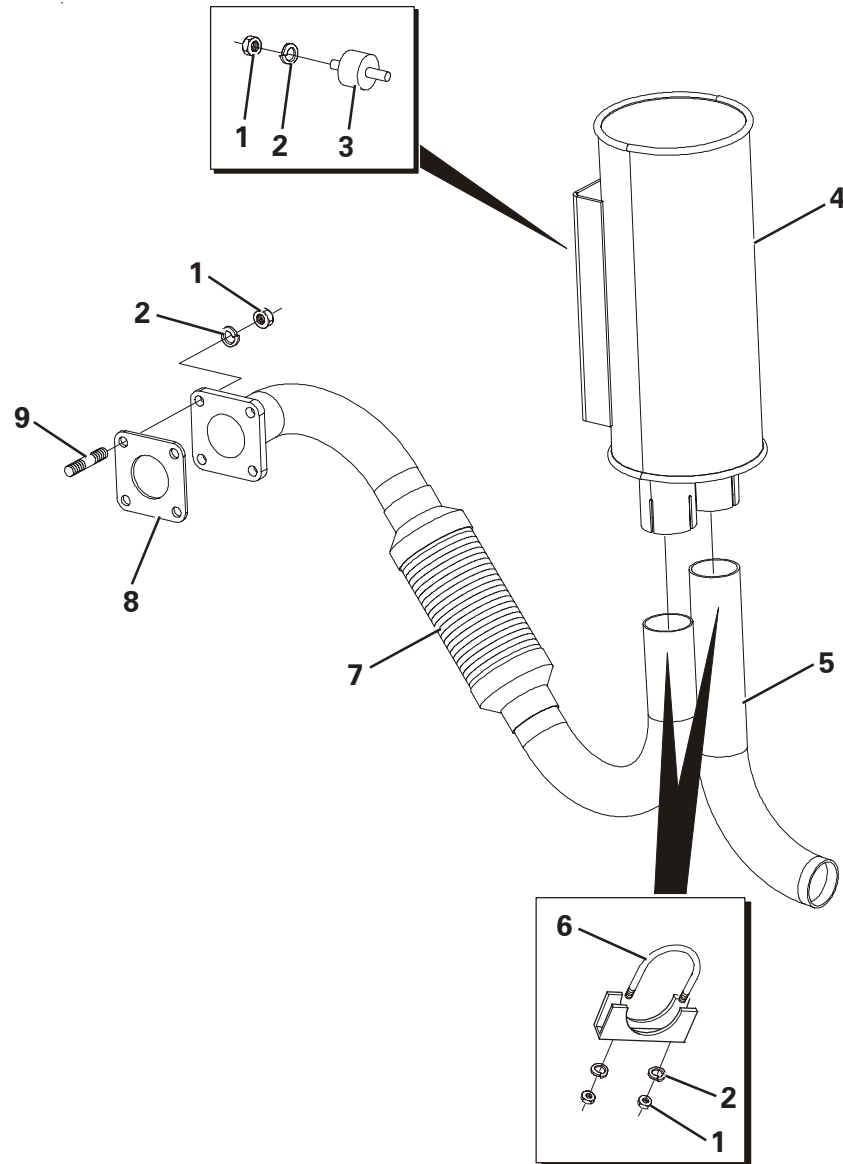
Item	Part No.	Description	Qty	U/M
1	T7465	SET SCREW	4.0	EA
2	T9345	WASHER	2.0	EA
3	T12972	SPRING WASHER	2.0	EA
4	T101153	TOP RADIATOR MOUNTING	1.0	EA
5	T101188	RADIATOR MTG RUBBER	3.0	EA
6	T53136	RADIATOR CAP	1.0	EA
7	T100421	SPRING BAND CLAMP	2.0	EA
8	T101219	RADIATOR OVERFLOW PIPE	1.0	EA
9	T12973	PLAIN WASHER	4.0	EA
10	T13457	NYLOC NUT	2.0	EA
11	T52805	BRACKET SUB-TANK	1.0	EA
12	T101180	RADIATOR	1.0	EA
13	T52800	TANK ASSEMBLY	1.0	EA
14	T52802	CAP	1.0	EA
15	T52803	CLAMP	1.0	EA
16	T52804	PIPE	1.0	EA
17	T52801	TANK	1.0	EA
18	T6693	JUBILEE CLIP	4.0	EA
19	T101142	BTM RAD HOSE	1.0	EA
20	T101143	TOP RAD HOSE	1.0	EA

**RADIATOR SEALS AND FIXINGS**



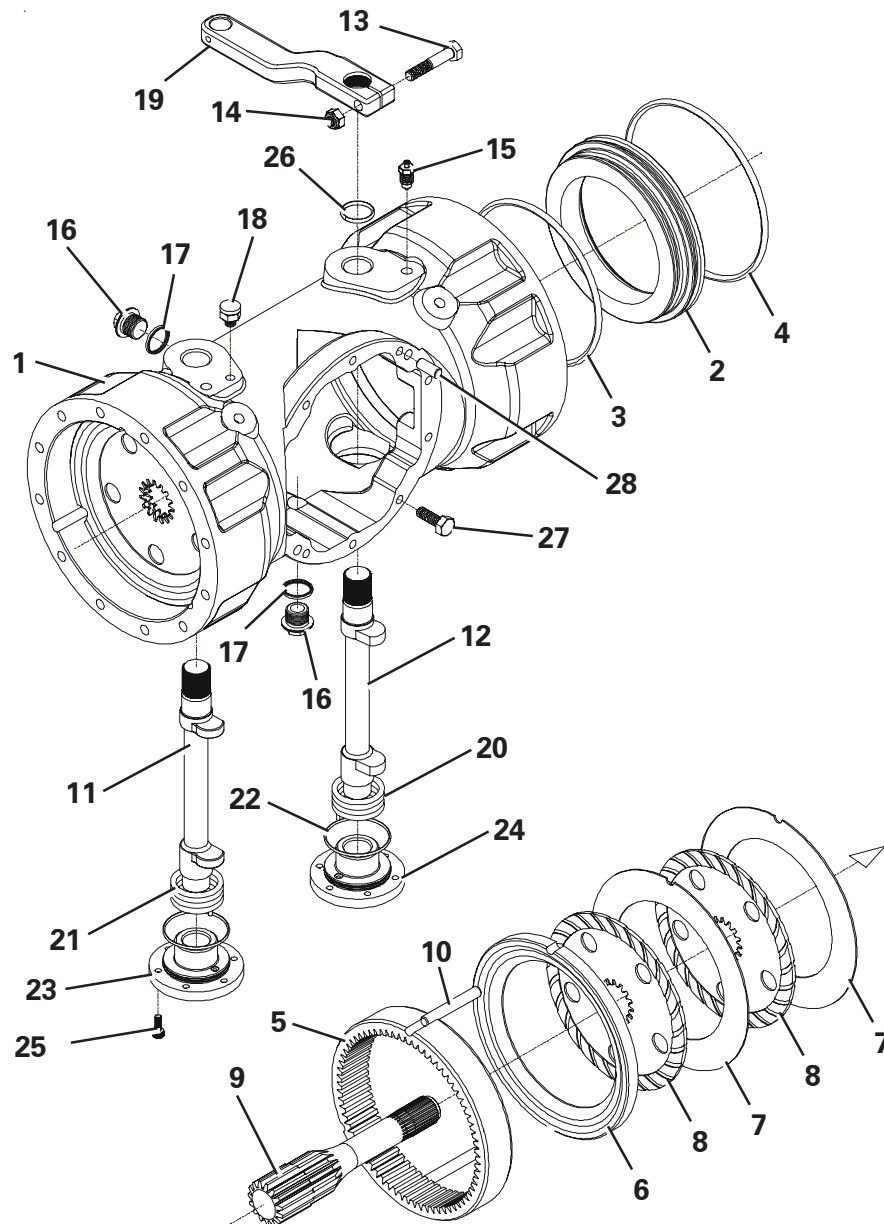
Item	Part No.	Description	Qty	U/M
1	T101265	SEAL REAR COVER HORIZONTAL	1.0	EA
2	T101264	SEAL REAR COVER VERTICAL	2.0	EA
3	T101266	SEAL	3.0	EA
4	T101735	RADIATOR SEAL	1.0	EA
5	T101157	RADIATOR COWL	1.0	EA
6	T12509	NUT	2.0	EA
7	T13362	SPRING WASHER	7.0	EA
8	T7466	SET SCREW	5.0	EA

**EXHAUST SYSTEM**



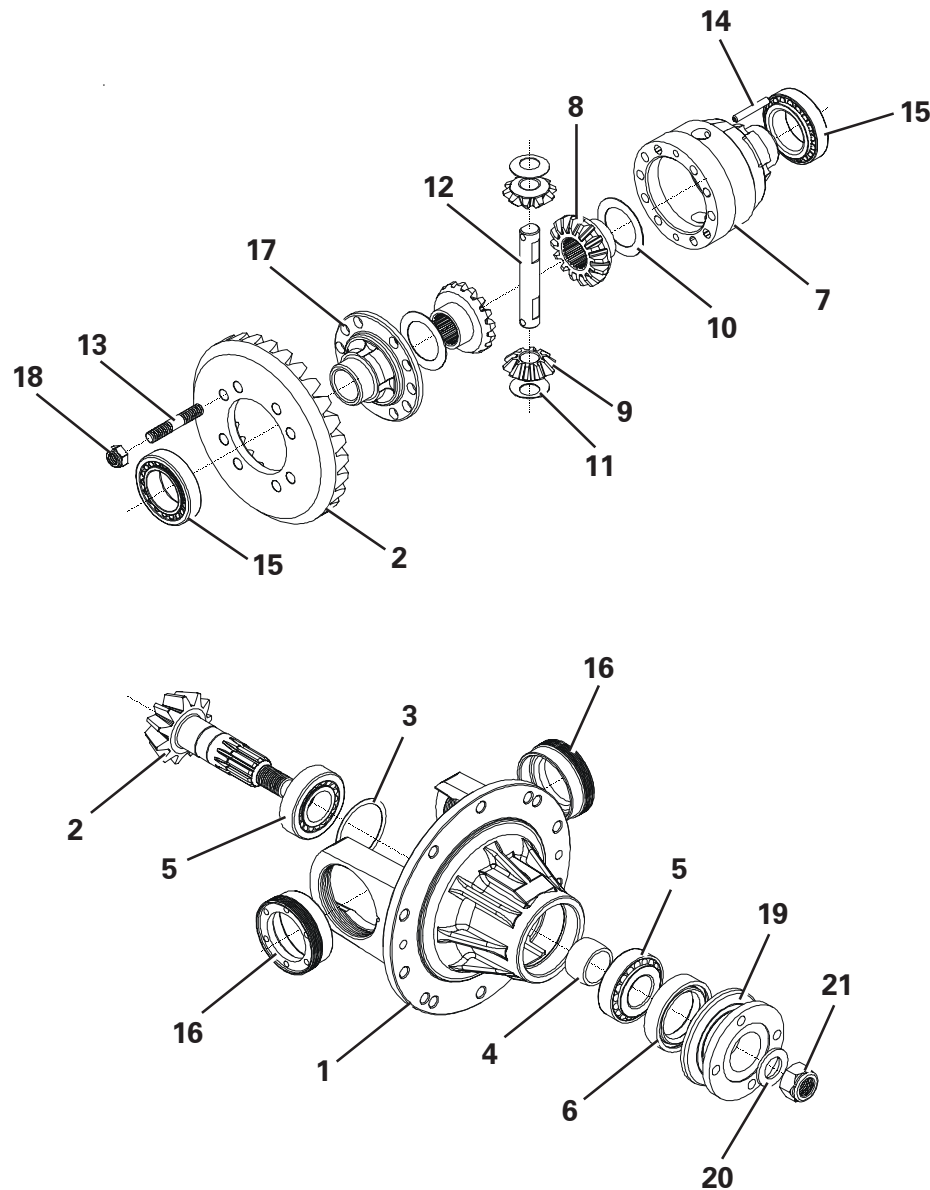
Item	Part No.	Description	Qty	U/M
1	T9775	NUT	11.0	EA
2	T12972	SPRING WASHER	11.0	EA
3	T100796	RUBBER BUFFER	3.0	EA
4	T101160	SILENCER	1.0	EA
5	T101161	OUTLET PIPE	1.0	EA
6	T18834	EXHAUST CLAMP	2.0	EA
7	T101397	EXHAUST PIPE	1.0	EA
8	T53112	GASKET	1.0	EA
9	T52797	STUD	4.0	EA

## FRONT AXLE - MAIN CASE



Item	Part No.	Description	Qty	U/M
A	T101012	FRONT AXLE ASSEMBLY	1.0	EA
1	T53131	MAIN CASE	1.0	EA
2	T3049	BRAKE PISTON	2.0	EA
3	T3047	'O' RING	2.0	EA
4	T3048	'O' RING	2.0	EA
5	T50163	ANNULUS	2.0	EA
6*	T53192	SPACER PLATE	2.0	EA
7*	T53193	BRAKE PLATE	4.0	EA
8*	T53194	BRAKE DISC	4.0	EA
9	T53132	SUN GEAR	2.0	EA
10	T3053	DOWEL PIN	4.0	EA
11	T53127	BRAKE LEVER LH	1.0	EA
12	T53128	BRAKE LEVER RH	1.0	EA
13	T52767	BOLT	2.0	EA
14	T52988	NUT	2.0	EA
15	T3038	BLEED NIPPLE	1.0	EA
16	T4248	PLUG	2.0	EA
17	T5596	HYDRAULIC SEAL	2.0	EA
18*	T53442	BREATHER	1.0	EA
19	T52927	BRAKE LEVER	2.0	EA
20	T2394	SPRING	1.0	EA
21	T2393	SPRING	1.0	EA
22	T52790	'O' RING	2.0	EA
23	T52752	COVER LH	1.0	EA
24	T52753	COVER RH	1.0	EA
25	T53126	SCREW	12.0	EA
26	T52791	'O' RING	2.0	EA
27	T3744	BOLT	10.0	EA
28	T3019	DOWEL PIN	2.0	EA

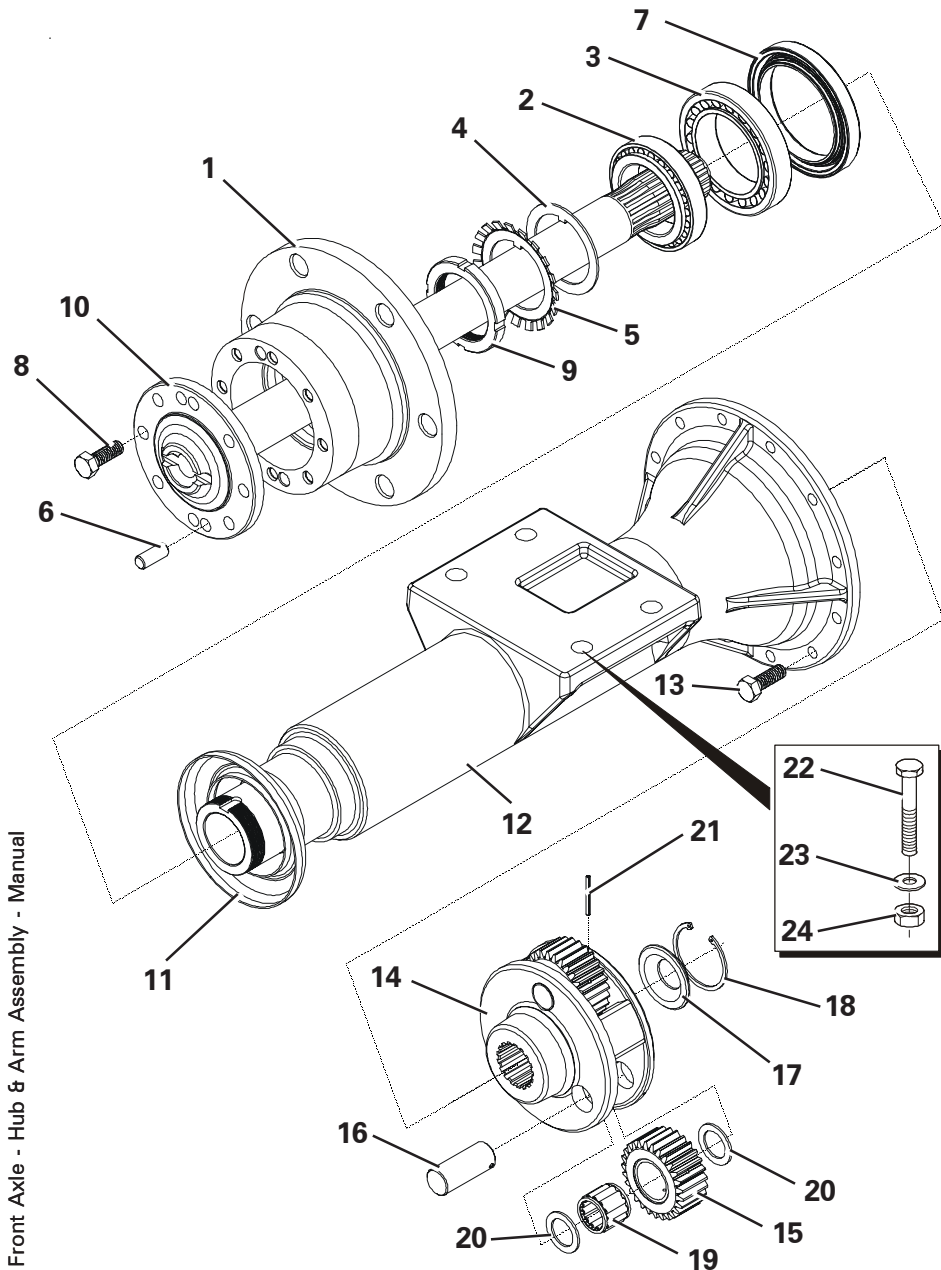
## FRONT AXLE - DIFF. ASSEMBLY



Item	Part No.	Description	Qty	U/M
1	T52929	PINION CARTRIDGE	1.0	EA
2	T52946	WHEEL & PINION	1.0	EA
3	T50302	SHIM 0.25MM	A/R	EA
	T50303	SHIM 0.30MM	A/R	EA
	T50304	SHIM 0.40MM	A/R	EA
4	T2892	SPACER	1.0	EA
5	T2893	PINION BEARING	2.0	EA
6	T2891	OILSEAL	1.0	EA
7	T52930	DIFF CASE LH	1.0	EA
8	T50298	DIFF.WHEEL	2.0	EA
9	T50299	DIFF.PINION	2.0	EA
10	T2888	THRUST WASHER	2.0	EA
11	T3027	THRUST WASHER	2.0	EA
12	T2198	DIFF SPIDER	1.0	EA
13	T50300	STUD	8.0	EA
14	T2200	SPRING PIN	2.0	EA
15	T3716	TAPER BEARING	2.0	EA
16	T52781	ADJUSTER NUT	2.0	EA
17	T52931	DIFF CASE RH	1.0	EA
18	T52988	NUT	8.0	EA
19	T52811	FLANGE	1.0	EA
20	T3013	WASHER	1.0	EA
21	T3012	NUT FLANGE	1.0	EA

**FRONT AXLE - HUB & ARM**

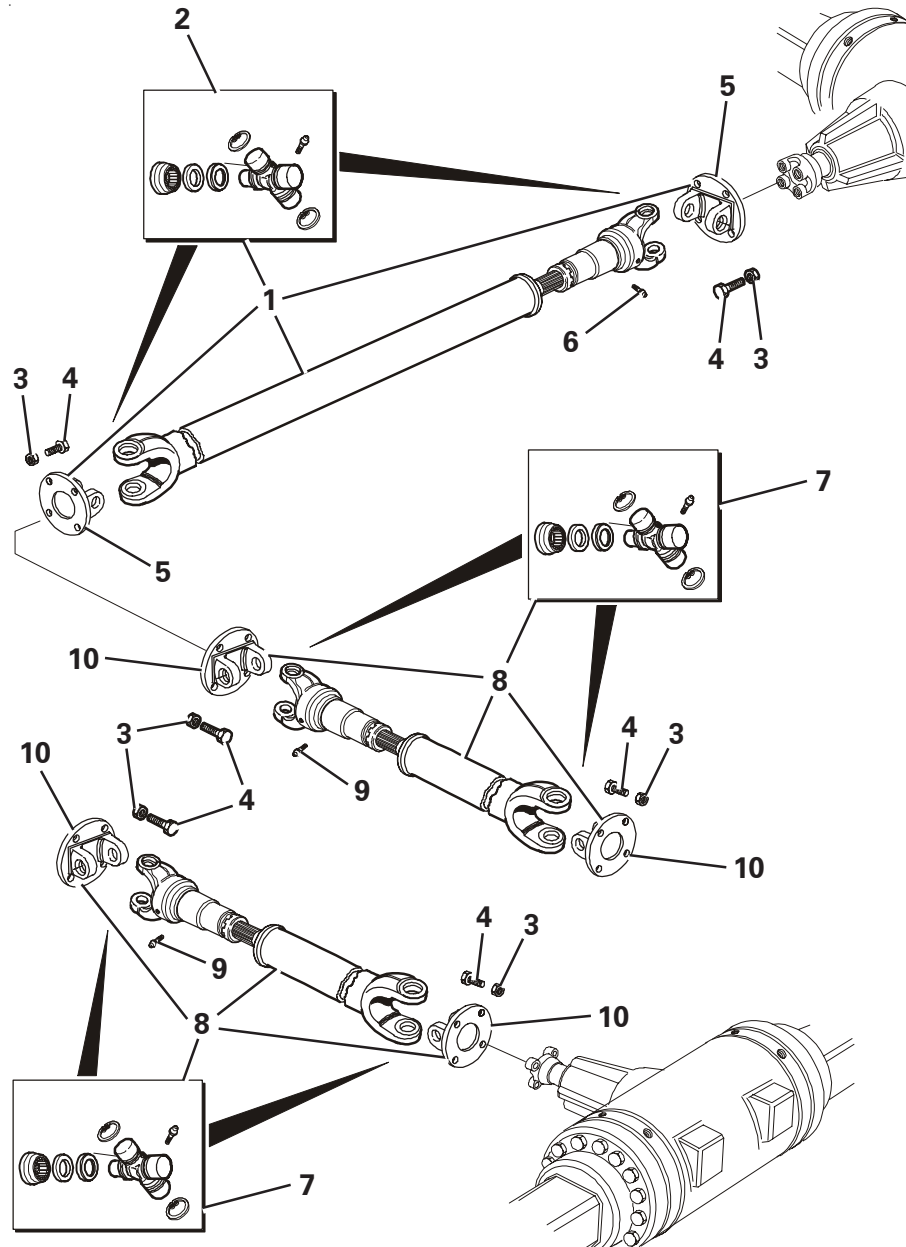
Item	Part No.	Description	Qty	U/M
1	T53022	HUB	2.0	EA
2	T52933	BEARING	2.0	EA
3	T52740	BEARING	2.0	EA
4	T2968	SPACER	2.0	EA
5	T2964	LOCK WASHER	2.0	EA
6	T3019	DOWEL PIN	4.0	EA
7	T52934	OIL SEAL	2.0	EA
8	T52935	BOLT	16.0	EA
9	T52936	LOCKNUT	2.0	EA
10	T53129	AXLE SHAFT	2.0	EA
11	T53134	HUB SEAL COVER	2.0	EA
12	T53130	AXLE ARM	2.0	EA
13	T52935	BOLT	24.0	EA
14	T51730	PLANET CARRIER	2.0	EA
15	T51792	PLANET GEAR	6.0	EA
16	T51793	PLANET PIN	6.0	EA
17	T51794	SPACER	2.0	EA
18	T3059	CIRCLIP	2.0	EA
19	T50612	PLANET CAGE ROLLER	6.0	EA
20	T2202	PLANET THRUST WASHER	12.0	EA
21	T3056	DOWEL	6.0	EA
22	T11315	BOLT	4.0	EA
23	T100867	PLAIN WASHER	4.0	EA
24	T14910	STOVER NUT	4.0	EA



Front Axle - Hub & Arm Assembly - Manual

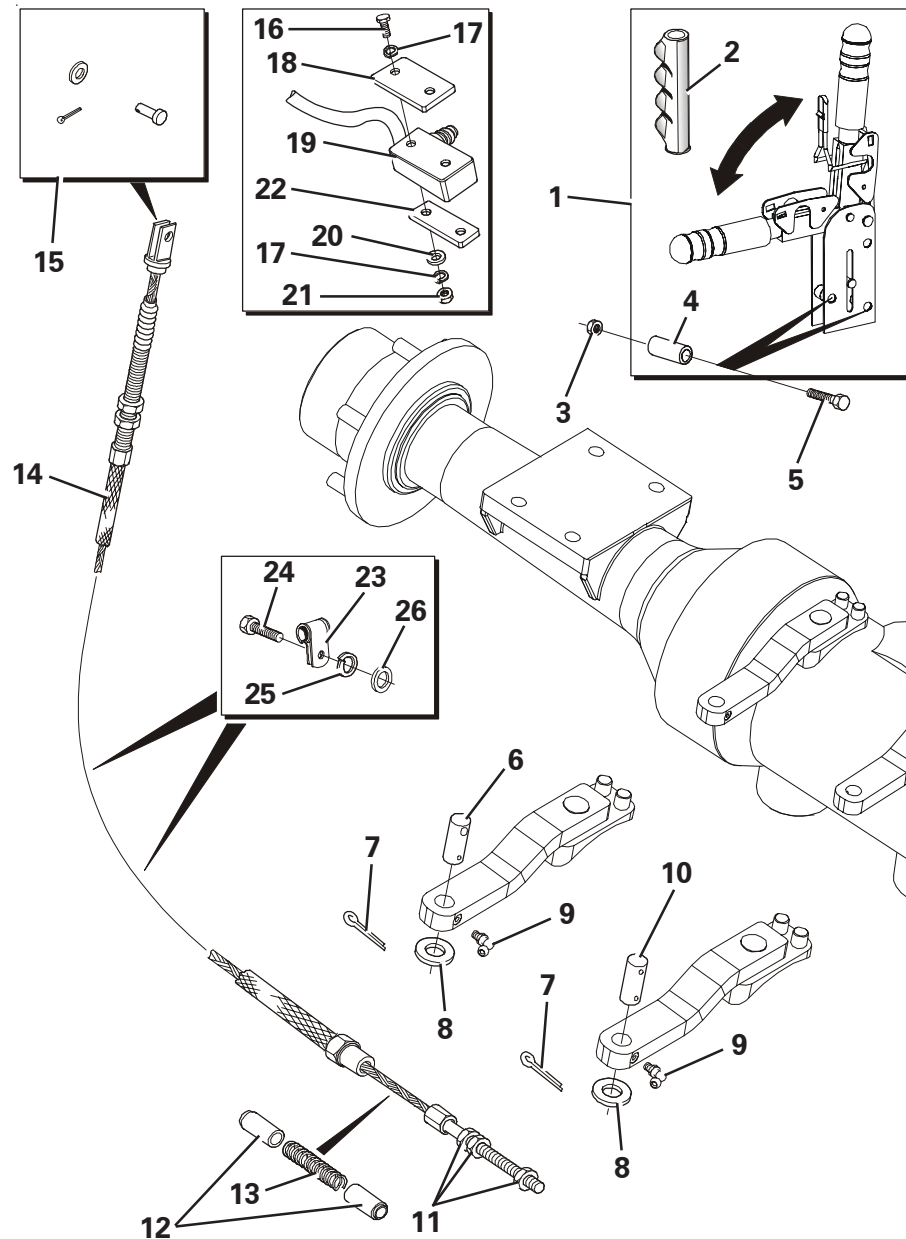
**PROPSHAFTS**

Item	Part No.	Description	Qty	U/M
1	T11378	PROPSHAFT	1.0	EA
2	T6587	UNIVERSAL JOINT	2.0	EA
3	T7631	PHILIDAS NUT	24.0	EA
4	T7628	BOLT	24.0	EA
5	T6582	FLANGE	2.0	EA
6	T6673	GREASE NIPPLE	1.0	EA
7	T52812	UNIVERSAL JOINT	4.0	EA
8	T100834	PROPSHAFT	2.0	EA
9	T13454	STRAIGHT GREASE NIPPLE	2.0	EA
10	T52813	FLANGE	4.0	EA



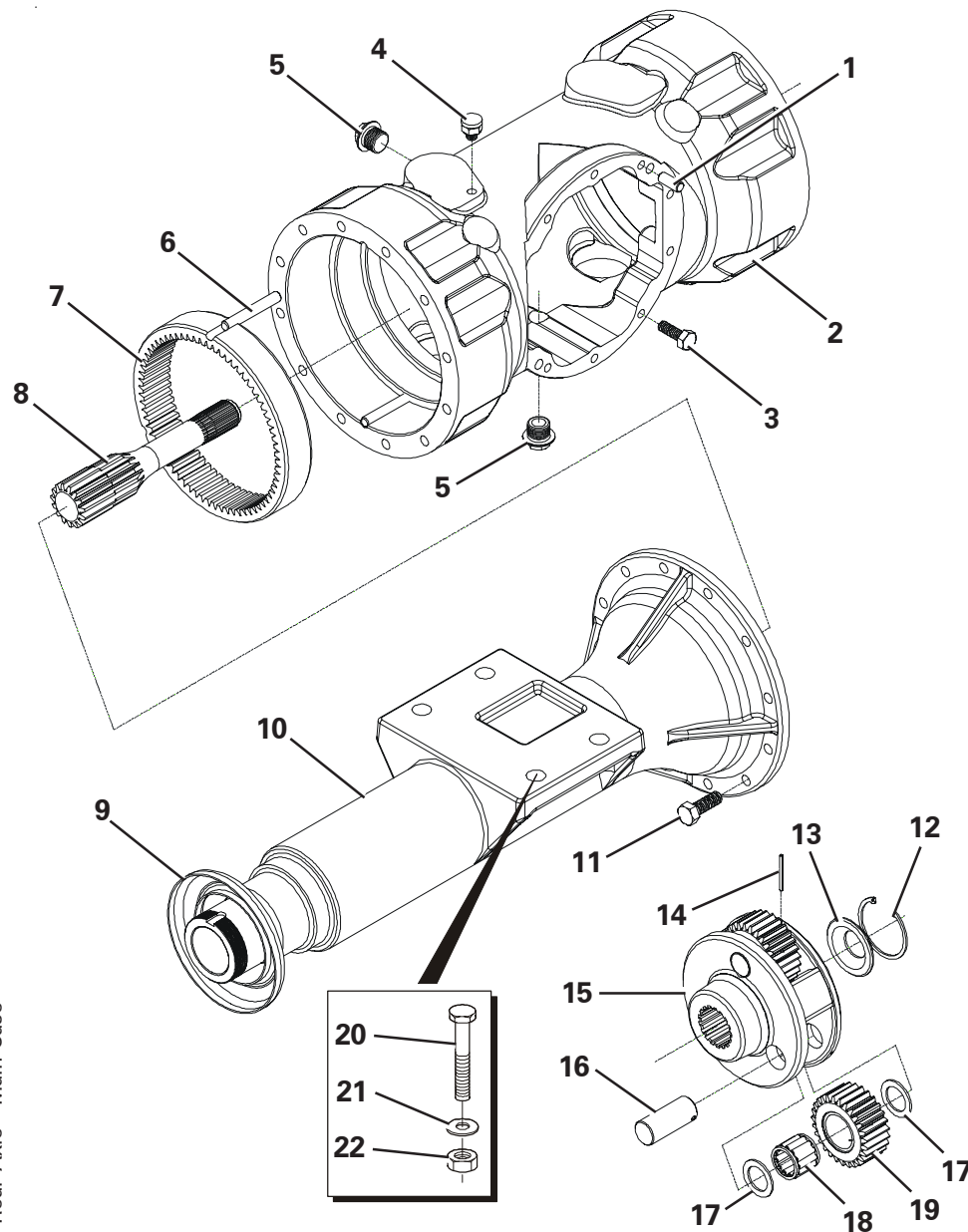
Propshaft - Manual - Phase 3

## HANDBRAKE ASSEMBLY



Item	Part No.	Description	Qty	U/M
1	T100893	OVERCENTRE HANDBRAKE	1.0	EA
2	T52947	GRIP	1.0	EA
3	T13064	NUT	3.0	EA
4	T10869	SPACER	3.0	EA
5	T16501	BOLT	3.0	EA
6	T12210	HANDBRAKE CABLE GUIDE	1.0	EA
7	T6751	SPLIT PIN	2.0	EA
8	T6766	WASHER	2.0	EA
9	T16587	GREASE NIPPLE	2.0	EA
10	T12211	HANDBRAKE CABLE STOP	1.0	EA
11	T6719	NUT	3.0	EA
12	T11768	SPRING SUPPORT	2.0	EA
13	T9722	GALVANISED HANDBRAKE SPRING	1.0	EA
14	T101281	HANDBRAKE CABLE	1.0	EA
15	T51714	CLEVIS PIN ASSY	1.0	EA
16	T13321	SET SCREW	2.0	EA
17	T11439	SPRING WASHER	2.0	EA
18	T13289	BACKING PLATE	1.0	EA
19	T100912	MICRO SWITCH	1.0	EA
20	T11440	WASHER	2.0	EA
21	T11447	NUT	2.0	EA
22	T101186	MICROSWITCH SPACER	1.0	EA
23	T11454	CABLE CLIP	2.0	EA
24	T7465	SET SCREW	2.0	EA
25	T12972	SPRING WASHER	2.0	EA
26	T12973	PLAIN WASHER	2.0	EA

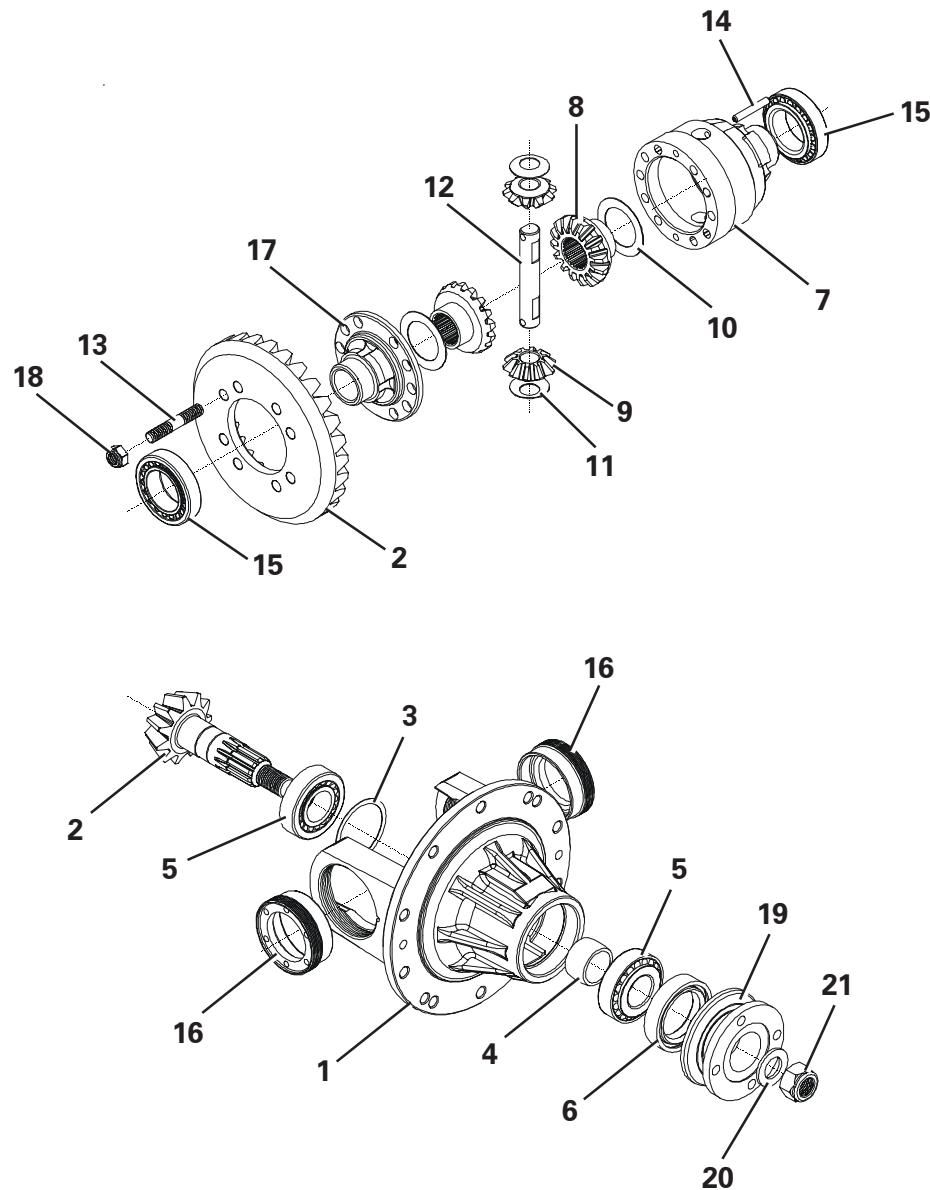
**REAR AXLE - MAIN CASE**



Item	Part No.	Description	Qty	U/M
A	T101011	REAR AXLE ASSEMBLY	1.0	EA
1	T3019	DOWEL PIN	2.0	EA
2	T52937	MAIN CASE	1.0	EA
3	T52935	BOLT	10.0	EA
4*	T53442	BREATHER	1.0	EA
5	T53074	DRAIN PLUG	2.0	EA
6	T3053	DOWEL PIN	4.0	EA
7	T50163	ANNULUS	2.0	EA
8	T52942	SUN GEAR	2.0	EA
9	T53134	HUB SEAL COVER	2.0	EA
10	T53130	AXLE ARM	2.0	EA
11	T52935	BOLT	24.0	EA
12	T3059	CIRCLIP	1.0	EA
13	T51794	SPACER	1.0	EA
14	T3056	DOWEL	2.0	EA
15	T51838	CARRIER	1.0	EA
16	T51793	PLANET PIN	2.0	EA
17	T2202	PLANET THRUST WASHER	4.0	EA
18	T50612	PLANET CAGE ROLLER	2.0	EA
19	T51792	PLANET GEAR	2.0	EA
20	T11315	BOLT	4.0	EA
21	T100867	PLAIN WASHER	4.0	EA
22	T14910	STOVER NUT	4.0	EA

Rear Axle - Main Case

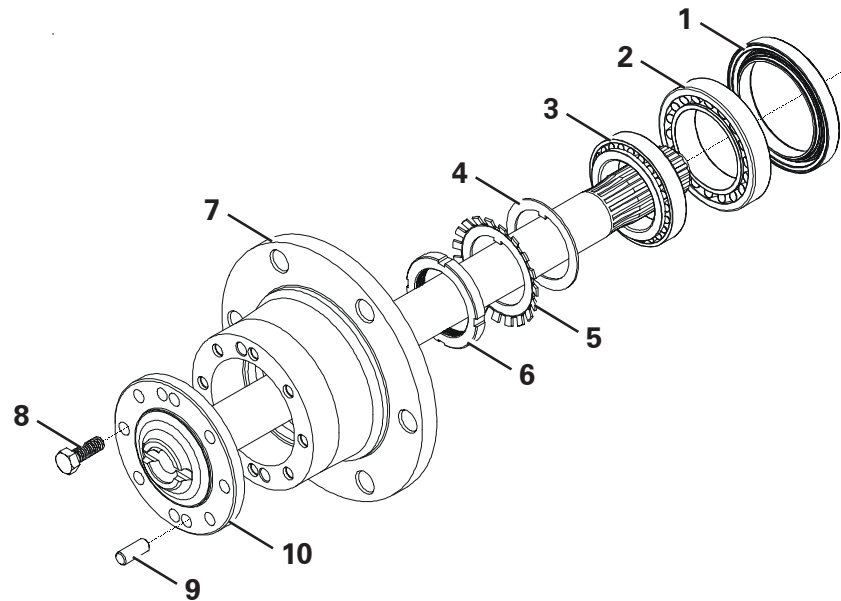
**REAR AXLE - DIFF. ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T52929	PINION CARTRIDGE	1.0	EA
2	T52946	WHEEL & PINION	1.0	EA
3	T50302	SHIM 0.25MM	A/R	EA
	T50303	SHIM 0.30MM	A/R	EA
	T50304	SHIM 0.40MM	A/R	EA
4	T2892	SPACER	1.0	EA
5	T2893	PINION BEARING	2.0	EA
6	T2891	OILSEAL	1.0	EA
7	T52930	DIFF CASE LH	1.0	EA
8	T50298	DIFF.WHEEL	2.0	EA
9	T50299	DIFF.PINION	2.0	EA
10	T2888	THRUST WASHER	2.0	EA
11	T3027	THRUST WASHER	2.0	EA
12	T2198	DIFF SPIDER	1.0	EA
13	T50300	STUD	8.0	EA
14	T2990	SPRING PIN	2.0	EA
15	T3716	TAPER BEARING	2.0	EA
16	T52939	ADJUSTER NUT	2.0	EA
17	T52931	DIFF CASE RH	1.0	EA
18	T52988	NUT	8.0	EA
19	T52811	FLANGE	1.0	EA
20	T3013	WASHER	1.0	EA
21	T3012	NUT FLANGE	1.0	EA

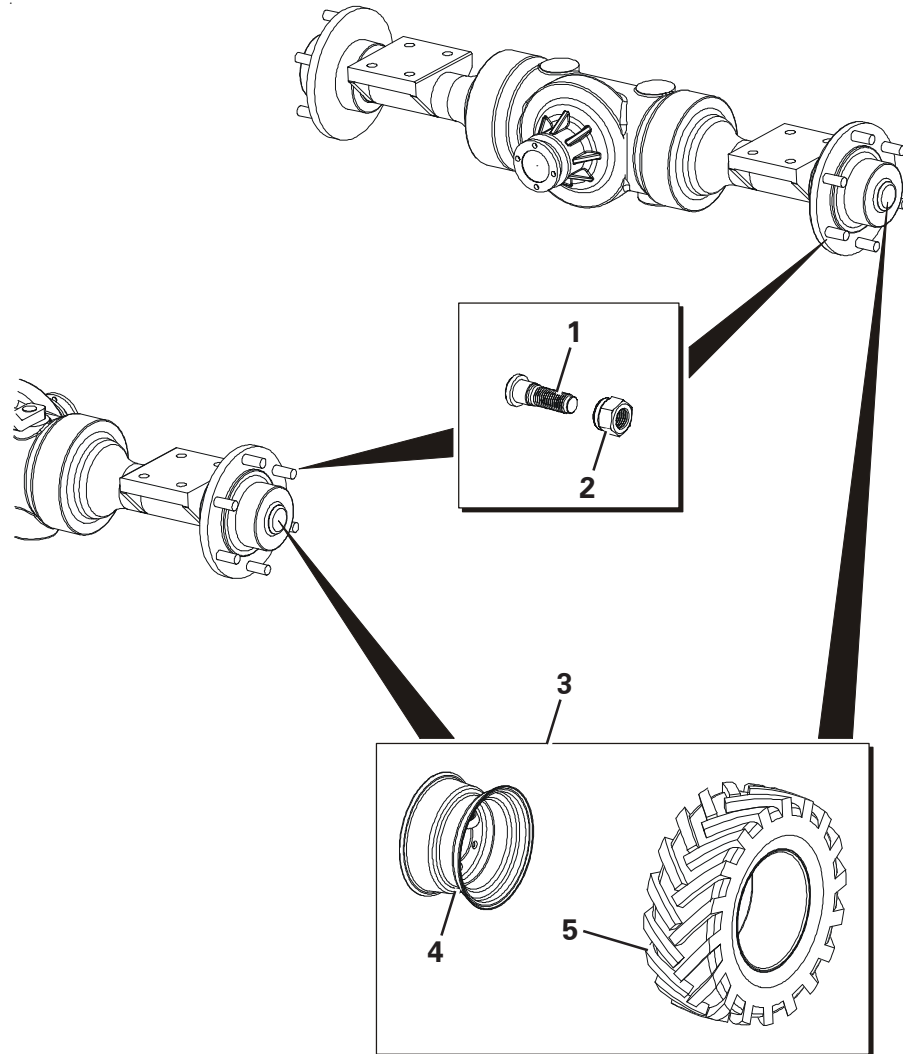
**REAR AXLE - HUB & ARM**

Item	Part No.	Description	Qty	U/M
1	T52934	OIL SEAL	2.0	EA
2	T52933	BEARING	2.0	EA
3	T52740	BEARING	2.0	EA
4	T2968	SPACER	2.0	EA
5	T2964	LOCK WASHER	2.0	EA
6	T52936	LOCKNUT	2.0	EA
7	T53022	HUB	2.0	EA
8	T52935	BOLT	16.0	EA
9	T3019	DOWEL PIN	4.0	EA
10	T53129	AXLE SHAFT	2.0	EA

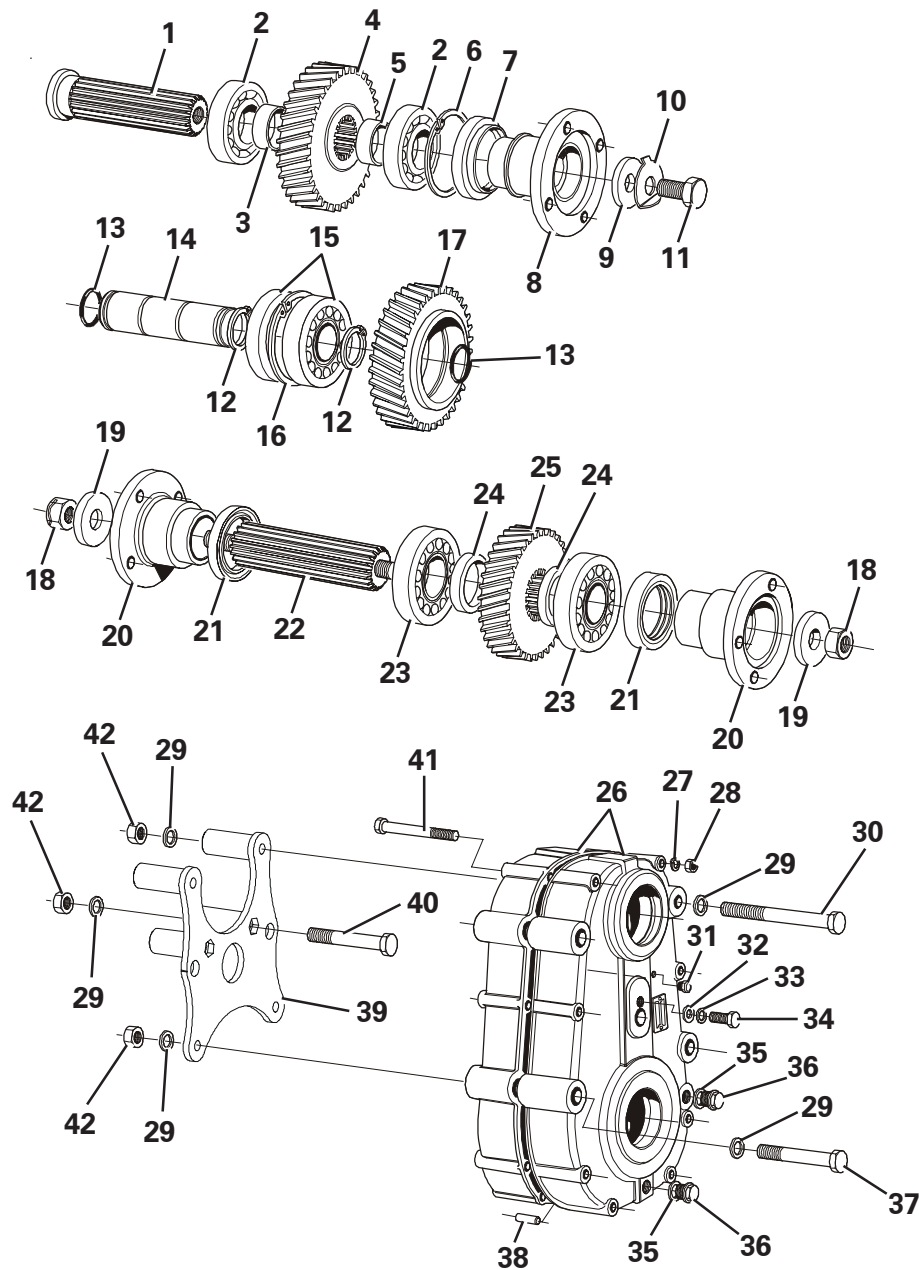


**WHEEL ASSEMBLY**

Item	Part No.	Description	Qty	U/M
1	T52739	WHEEL STUD	24.0	EA
2	T52747	WHEEL NUT	24.0	EA
3	T100945	WHEEL ASSEMBLY	4.0	EA
4	T100944	WHEEL RIM	1.0	EA
5	T20966	TYRE	1.0	EA

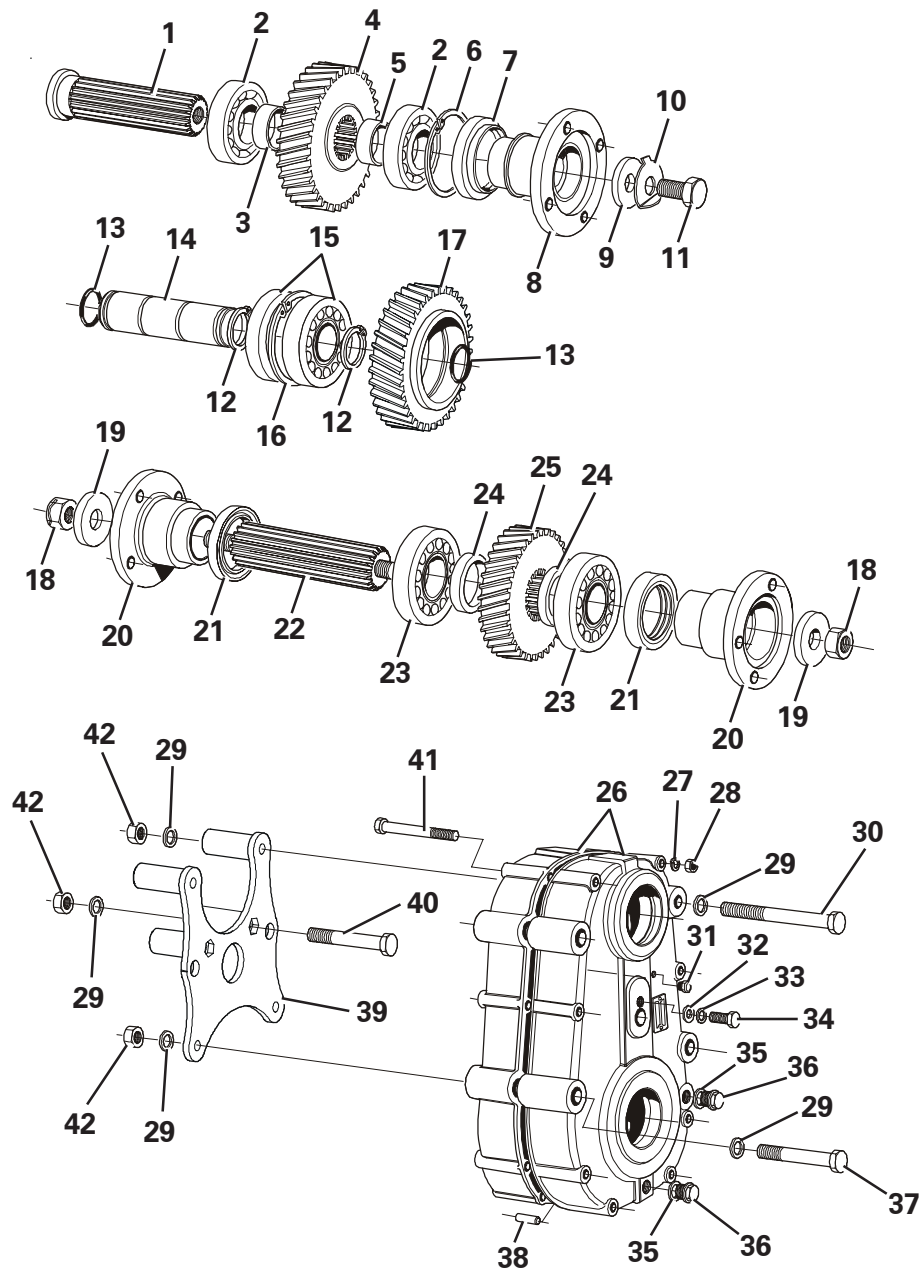


TRANSFER BOX



Item	Part No.	Description	Qty	U/M
A	T15743	DROPBOX	1.0	EA
1	T3495	INPUT SHAFT	1.0	EA
2	T4540	BEARING	2.0	EA
3	T3440	SPACER	1.0	EA
4	T50242	INPUT GEAR	1.0	EA
5	T3439	SPACER	1.0	EA
6	T3113	CIRCLIP	1.0	EA
7	T4531	OILSEAL	1.0	EA
8	T4200	COUPLING	1.0	EA
9	T3646	WASHER	1.0	EA
10	T4443	LOCK WASHER	1.0	EA
11	T3483	SCREW	1.0	EA
12	T2379	CIRCLIP	2.0	EA
13	T3446	O RING	2.0	EA
14	T2197	IDLER SHAFT	1.0	EA
15	T2398	ROLLER BEARING	2.0	EA
16	T4431	CIRCLIP	1.0	EA
17	T50243	IDLER GEAR	1.0	EA
18	T1696	NUT	2.0	EA
19	T1697	THICK WASHER	2.0	EA

**TRANSFER BOX**



Item	Part No.	Description	Qty	U/M
20	T3487	COUPLING	2.0	EA
21	T3112	OILSEAL	2.0	EA
22	T1698	OUTPUT SHAFT	1.0	EA
23	T3111	BEARING	2.0	EA
24	T3115	SPACER	2.0	EA
25	T50244	OUTPUT GEAR	1.0	EA
26	T2948	GEARCASE	1.0	EA
27	T6705	SPRING WASHER	8.0	EA
28	T9775	NUT	8.0	EA
29	T14748	PLAIN WASHER	10.0	EA
30	T101271	BOLT	2.0	EA
31	T4418	BREATHER	1.0	EA
32	T2195	WASHER	1.0	EA
33	T2196	SEAL	1.0	EA
34	T2159	SCREW	1.0	EA
35	T3769	FIBRE WASHER	2.0	EA
36	T3770	PLUG	2.0	EA
37	T101270	BOLT	2.0	EA
38	T4065	DOWEL	2.0	EA
39	T100983	DROPBOX MOUNTING ASSY	1.0	EA
40	T12609	BOLT	2.0	EA
41	T3472	BOLT	8.0	EA
42	T14283	PHILIDAS NUT	6.0	EA

Transfer Box - 2 Tonne

**OPTIONAL EXTRAS**

Part No.	Description	Qty	U/M
T100133	ROTATING BEACON	1.0	EA
T100308	XENON BEACON	1.0	EA
KIT 72	ACCESSORIES - REVERSE ALARM	1.0	EA
KIT 242	ACCESSORIES - ELECTRONIC SHUTDOWN	1.0	EA
T100743	ANTI SLIP PADS (MUDGUARDS)	4.0	EA
T101155	ACCESSORIES - ROPS FRAME KIT	1.0	EA
T101156	ACCESSORIES - HINGED ROPS FRAME KIT	1.0	EA
KIT 275	TRANSFER SET - 2 TONNE	1.0	EA

**MODIFIED AND ADDITIONAL PARTS**

Old Part No.	Qty	Description	Page	Item	Prefix	New Part No.
T12172	1.0	DRIVE PLATE	26	16	2	T101729
T12858	4.0	BOLT	12	12	3	T101725
T7631	4.0	PHILIDAS NUT	12	13	3	T101724
T100212	2.0	HINGE WITH GREASE NIPPLE	4	13	-	DELETED
ADDED	1.0	HINGE RH (WITH GREASE NIPPLE)	4	13	-	T101780
ADDED	1.0	HINGE LH (WITH GREASE NIPPLE)	4	32	-	T101779
T16948	1.0	NON-SLIP MAT	13	11	-	DELETED

**MODIFIED AND ADDITIONAL PARTS TO AXLES - T101012**

Old Part No.	Qty	Description	Page	Item	Serial No.	New Part No.
T50161	2.0	SPACER PLATE	36	6	1542452	T53192
T3050	4.0	BRAKE PLATE	36	7	1542452	T53193
T3051	4.0	BRAKE DISC	36	8	1542452	T53194
N/A	1.0	BRAKE PLATE KIT (CONSISTING THE ABOVE)	36	6,7,8	1542452	KIT 279

NEW AND OLD PARTS MUST NOT BE MIXED. PLEASE ORDER KIT 279 WHEN REPLACING OLD PARTS.

T52750	1.0	BREATHER	36	18	-	T53442
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**MODIFIED AND ADDITIONAL PARTS TO AXLES - T101011**

Old Part No.	Qty	Description	Page	Item	Serial No.	New Part No.
T52750	1.0	BREATHER	41	4	-	T53442

**MODIFIED AND ADDITIONAL PARTS**

Old Part No.	Qty	Description	Page	Item	Prefix	New Part No.
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## Service and Warranty

Thwaites give a warranty which, subject to certain conditions, gives an assurance as to the quality of their product.

### The Thwaites warranty states:-

In the manufacture of Thwaites machines we endeavour to ensure that only the best workmanship and materials are used. Consequently, provided:-

1. The machine has been properly used in accordance with our recommendations and,
2. That no alterations have been made to the machine without prior written approval and,
3. That the machine has been maintained, serviced and lubricated in accordance with our recommendations and,
4. That Thwaites Warranty Certificate and/or New Machine Delivery Report has been completed and received by Thwaites within one month of delivery to the user.
5. That Thwaites receive a correctly completed Warranty Claim form within thirty days of the failure occurring.
6. **UK**  
That the alleged defective parts are returned to Thwaites within 6 weeks of date of failure.
7. **All other territories**  
That unless otherwise instructed the alleged defective parts are to be stored for inspection for a 6 month period from date of failure.

We will examine the alleged defective part and if we are reasonably satisfied that any defect is solely due to bad workmanship or materials, we will at our cost and at our option either repair any defective part or supply a replacement part in full discharge of all obligations upon us.

This warranty does not, however, extend to reconditioned or second-hand machines. For the avoidance of doubt, we will not entertain any other claims of a direct or consequential nature of whatsoever description and our responsibility is limited to the above.

The above warranty shall in no way detract from your statutory rights

#### **Warranty**

It is important to use only genuine Thwaites Limited spare parts and to adhere strictly to the conditions of operation and maintenance laid down by Thwaites Limited.

**Your warranty may be invalidated if you do not comply with the above recommendations.**