

Keep with Operator's Manual

BACKHOE SKID-STEER QUICK-ATTACH ADAPTER KIT 75 & 85 BACKHOE BOBCAT SKID-STEER LOADERS

BOBCAT SKID-STEER MODELS

751, 753, 763, 773, 863, S160, S175, S185 & T190

BACKHOE SKID-STEER ADAPTER KIT GENERAL INFORMATION

Adapter kit can be installed on tractor using tools ordinarily available.

References to left and right used in these instructions refer to position when seated in operating position on skid-steer.

This adapter kit consists of a skid-steer compatible quick-attach adapter, which fastens to a 75 or 85 backhoe, together with turnbuckles, stop brackets, and attaching hardware, which stabilize backhoe and prevent skid-steer lift or tilt operation while backhoe is mounted. Parts are designed to allow quick and easy mounting and dismounting of backhoe from skid-steer, leaving minimal hook brackets (to which turnbuckles attach) at skid-steer cleanout holes. Hook brackets do not interfere with other uses of skid-steer, so removal is optional.



WARNING: To avoid injury while mounting or dismounting backhoe from skid-steer, do not allow bystanders within ten feet of skid-steer or backhoe.

Lower and level skid-steer boom to rest on ground before installing adapter kit and backhoe. Shut off engine and engage brakes during installation.

INSTALLING QUICK ATTACH ADAPTER TO BACKHOE (Figure 1)

1. With backhoe and pallet containing quick-attach adapter (1) on firm level ground, place pallet near rear (mounting end) of backhoe main frame, with link pins (10) away from backhoe.
2. Unband backhoe quick-attach adapter (1) from shipping pallet and remove attaching hardware from shipping angles. Remove lag screws which fasten hook-ear brackets (2 & 3) and backup flats (4) to shipping pallet. Unband parts bag from quick-attach adapter (1).

NOTE: For ease of installation, quick-attach adapter (1) is preassembled with turnbuckle assemblies (7, 8 & 9) and connecting pins (10 & 11), and stop brackets (5) with bumper pads (6) and attaching hardware (15, 16, 19, 22 & 23).

3. Tip quick-attach adapter (1) up toward backhoe, with stop brackets (5) up. Fasten quick-attach adapter (1) to backhoe using 7/8 x 2-1/2" cap screws (12), lock washers (17), and hex nuts (20) in bottom pair of holes closest to backhoe, and 3/4 x 1-3/4" cap screws (13) and lock nuts (21) in remaining three pairs of holes. Refer to general torque specifications table to tighten hardware to applicable torques.

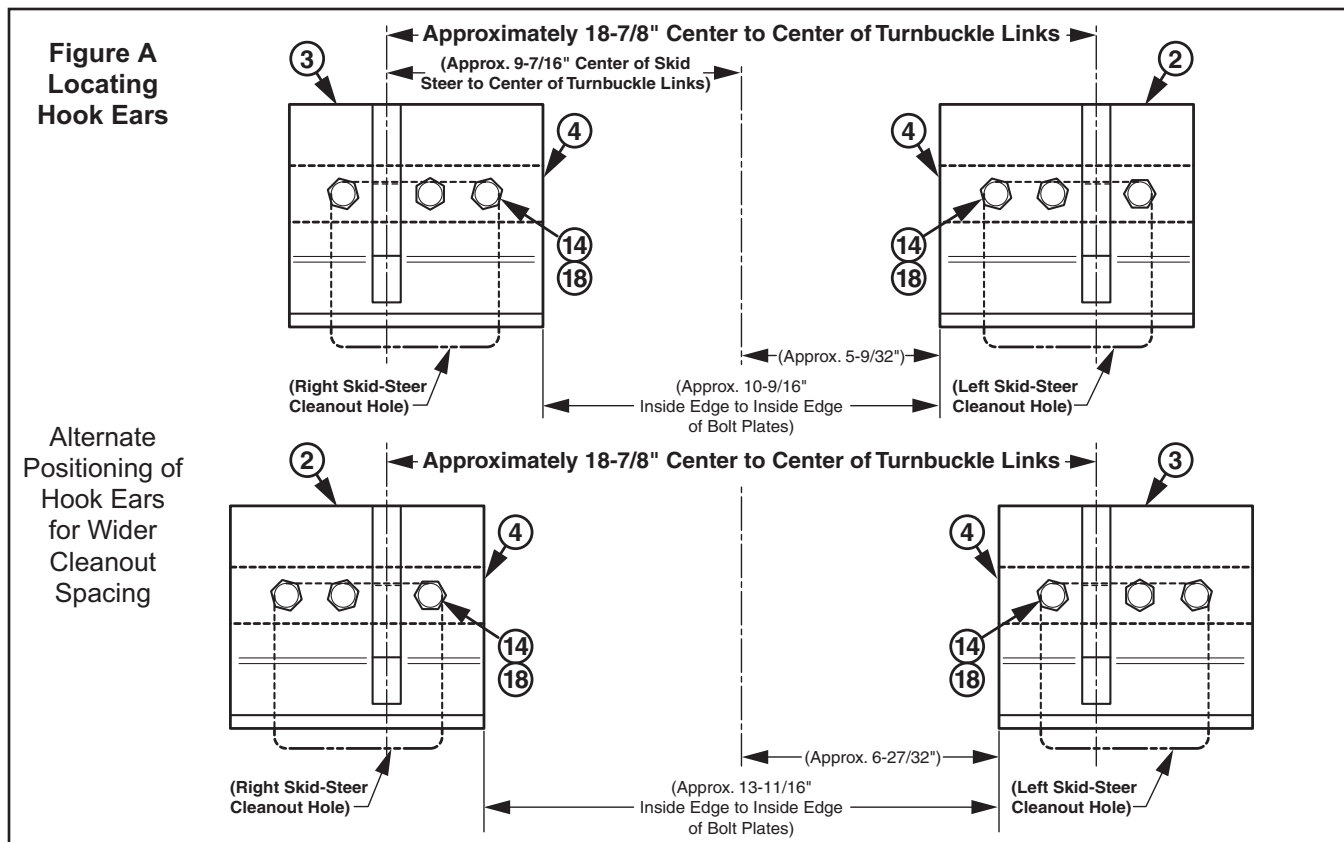
ATTACHING HOOK-EAR BRACKETS TO SKID-STEER CLEANOUT HOLES

1. Remove cleanout covers and attaching hardware from skid-steer cleanout holes. These parts will not be reused in this application.
2. Fasten hook ears (2 & 3) to skid-steer loader at top of cleanout holes on skid-steer front frame using backup flats (4), 5/8 x 2" cap screws, (14) and lock washers (18).

NOTE: Hook ears (2 & 3) are manufactured with hook off-center to allow them to be placed so hooks will most closely match centerline spacing of turnbuckle ears on quick-attach adapter (1). Place hook ears (2 & 3) so distance between hook centers is as close to 18-7/8" as possible. See Figure A.

IMPORTANT: Position hook ears (2 & 3) and backup flats (4) to top of cleanout holes, to allow cleanout holes to be open at bottom and to prevent hook ears (2 & 3) from sliding upward under load.

3. Tighten 5/8-11 Grade 5 hardware (14 & 18) securing hook ears (2 & 3) and backup flats (4) to cleanout holes to 126-139 ft.-lbs. (171-188 Nm) of torque.



MOUNTING BACKHOE ONTO SKID-STEER

1. Attach skid-steer quick-attach to quick-attach adapter (1) and backhoe. Latch quick-attach lock pins of skid-steer. Visually inspect attachment mechanism to verify lock pins are engaged through latch plate of quick-attach adapter.

NOTE: If backhoe quick-attach adapter (1) is not securely engaged, detach and try again to attach backhoe.

2. Connect backhoe hydraulic hoses to skid-steer auxiliary hydraulic quick couplers. Refer to instructions provided with backhoe hydraulic kit to couple hoses. It may be necessary to carefully operate backhoe boom and dipperstick to move quick-attach adapter more toward vertical or to lower skid-steer boom completely down.
3. Start engine and activate backhoe hydraulics. Check backhoe for proper function.
4. Raise backhoe boom and stabilizers into transport position. Lower skid-steer boom completely down.
5. Using skid-steer tilt cylinder, tilt backhoe rearward until rubber bumper pads (6) contact front of skid-steer boom.

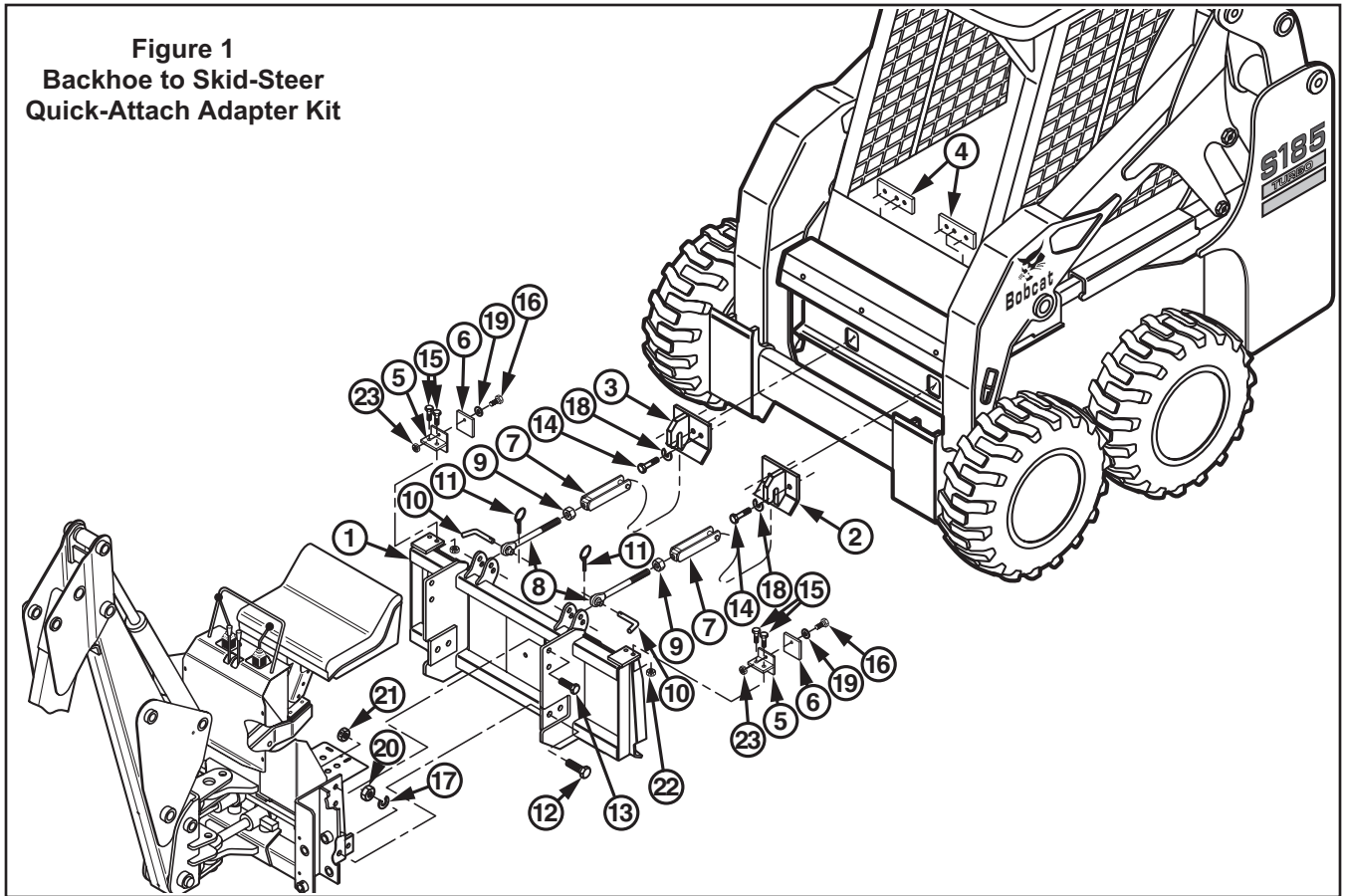
NOTE: If skid-steer lacks sufficient hydraulic power to tilt backhoe rearward, lower backhoe boom to ground and place backhoe boom function lever in float position. Then reattempt tilting backhoe to contact rubber bumper pads (6) to boom.

6. Turn links (7) of turnbuckle assemblies either direction to lengthen or shorten turnbuckles to appropriate length as necessary, to secure links (7) to hook ears (2 & 3). Use 1" hex nut (9) as a jam nut to jam link (7) in place at required turnbuckle length. Use 3/4" link pin (10) and 5/16" linch pin (11) to fasten link to quick-attach adapter (1). Use set of holes in ears on quick-attach adapter (1) that allows clearance between turnbuckle assembly and skid-steer boom crossmember and/or lock pin handles.

NOTE: If backhoe and quick-attach adapter have been mounted on skid-steer and turnbuckle was adjusted to proper length previously, it is not necessary to readjust turnbuckle length. It will be necessary to temporarily unfasten linch pins (11) and link pins (10) at turnbuckle rod eyes to hook link ends (7) of turnbuckle assemblies to hook ears (2 & 3).

NOTE: While digging with backhoe, it is normal for bumper pads (6) on adapter to move forward slightly and not maintain contact with skid-steer boom arms.

Figure 1
Backhoe to Skid-Steer
Quick-Attach Adapter Kit



PARTS LIST – BACKHOE SKID-STEER QUICK-ATTACH ADAPTER KIT

Item	Part No.	Description	Qty.
*1	50995	BRACKET, Backhoe Quick-Attach Adapter	1
2	50982-1	BRACKET, Hook-Ear, Left	1
3	50982-2	BRACKET, Hook-Ear, Right	1
4	50983	FLAT, Backup	2
*5	50911	BRACKET, Stop	2
*6	50996	BUMPER, Rubber, Pad	2
*7	50976	LINK, Turnbuckle Assembly	2
*8	50987	ROD EYE, Turnbuckle Assembly	2
*9	41836-20	NUT, Hex, 1-8	2
*10	51006-1	PIN, Link, 3/4 Diameter x 6-11/16" Long	2
*11	44756-1	PIN, Linch, 5/16 Diameter x 1-5/5" Long	2
12	41838-45	SCREW, Cap, 7/8-9 x 2-1/2", Grade 5	2
13	41838-30	SCREW, Cap, 3/4-10 x 1-3/4" Grade 5	6
14	41838-27	SCREW, Cap, 5/8-11 x 2", Grade 5	6
*15	41838-12	SCREW, Cap, 1/2-13 x 1-3/4", Grade 5	4
*16	41838-9	SCREW, Cap, 3/8-16 x 1-1/4", Grade 5	2
17	41837-9	WASHER, Lock, 7/8"	2
18	41837-7	WASHER, Lock, 5/8"	6
*19	42502-28	WASHER, Flat, 3/8"	2
20	41836-9	NUT, Hex, 7/8-9	2
21	41840-8	NUT, Lock, 3/4-10	6
*22	41840-5	NUT, Lock, 1/2-13	4
*23	41840-3	NUT, Lock, 3/8-16	2

* Items are preassembled to backhoe quick-attach mounting plate.

DISMOUNTING BACKHOE FROM SKID-STEER

1. Remove linch pins (11) and link pins (10) from rod eye (8) end of turnbuckle assemblies. Turnbuckle will drop out of quick attach adapter ears and hook. Reattach turnbuckle rod-eye (8) to ears on quick-attach adapter using link pins (10) and linch pins (11) for storage of parts.
2. Start skid-steer engine. With backhoe boom straight back, install swing lock pin. Extend dipperstick completely out and lower backhoe boom and bucket to ground.



WARNING: For proper support of backhoe, do not place boom control lever in float position. Place boom control handle in center, neutral, position.

3. Lower backhoe stabilizers to ground. Stabilizers will support detached backhoe.

4. From inside skid-steer, shut off skid-steer engine and set parking brake. Operate control lever for skid-steer auxiliary quick coupler forward and back to relieve pressure in backhoe and skid-steer hydraulic lines. Uncouple backhoe hydraulic couplers.

NOTE: If desired, right and left hook ears (2 & 3), backup flats (4), and attaching hardware (14 & 18) may be removed from skid-steer cleanouts at this time. However, removal is not required, as hook ears and backup flats do not interfere with other uses of skid-steer.

5. Turn quick-attach lock pin handles to unlatch (up) position to disengage catch pins from latch plate of backhoe quick-attach adapter.
6. Start skid-steer engine, release brake, and extend bucket cylinders while slowly backing skid-steer away from backhoe, until skid-steer quick-attach disengages from backhoe quick-attach adapter.

GENERAL TORQUE SPECIFICATIONS

USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

Standard American and Metric Cap Screws

AMERICAN STANDARD CAP SCREWS									METRIC CAP SCREWS								
SAE Grade	5				8				Metric Class	8.8				10.9			
Typ. Head Markings									Typ. Head Markings								
Cap Screw	TORQUE				TORQUE				Cap Screw	TORQUE				TORQUE			
Size	FT·LBS		N·m		FT·LBS		N·m		Size	FT·LBS		N·m		FT·LBS		N·m	
Inches	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	Millimeters	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
1/4 - 20	6.25	7.25	8.5	10	8.25	9.5	11	13	M6 x 1.00	6	8	8	11	9	11	12	15
1/4 - 28	8	9	11	12	10.5	12	14	16	M8 x 1.25	16	20	21.5	27	23	27	31	36.5
5/16 - 18	14	15	19	20	18.5	20	25	27	M10 x 1.50	29	35	39	47	42	52	57	70
5/16 - 24	17.5	19	23	26	23	25	31	34	M12 x 1.75	52	62	70	84	75	91	102	123
3/8 - 16	26	28	35	38	35	37	47.5	50	M14 x 2.00	85	103	115	139	120	146	163	198
3/8 - 24	31	34	42	46	41	45	55.5	61	M16 x 2.50	130	158	176	214	176	216	238	293
7/16 - 14	41	45	55.5	61	55	60	74.5	81	M18 x 2.50	172	210	233	284	240	294	325	398
7/16 - 20	51	55	69	74.5	68	75	92	102	M20 x 2.50	247	301	335	408	343	426	465	577
1/2 - 13	65	72	88	97.5	86	96	116	130	M22 x 2.50	332	404	450	547	472	576	639	780
1/2 - 20	76	84	103	114	102	112	138	152	M24 x 3.00	423	517	573	700	599	732	812	992
9/16 - 12	95	105	129	142	127	140	172	190	M27 x 3.00	637	779	863	1055	898	1098	1217	1488
9/16 - 18	111	123	150	167	148	164	200	222	M30 x 3.00	872	1066	1181	1444	1224	1496	1658	2027
5/8 - 11	126	139	171	188	168	185	228	251	NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal engine oil. They do not apply if special graphite or moly sulphide greases or other extreme lubricants are used.								
5/8 - 18	152	168	206	228	203	224	275	304									
3/4 - 10	238	262	322	355	318	350	431	474									
3/4 - 16	274	305	371	409	365	402	495	544									
7/8 - 9	350	386	474	523	466	515	631	698									
7/8 - 14	407	448	551	607	543	597	736	809									
1 - 8	537	592	728	802	716	790	970	1070									
1 - 14	670	740	908	1003	894	987	1211	1337									

INSTALLATION INSTRUCTIONS