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**Attachment of Implements to
Agricultural Wheeled Tractors
Equipped with Quick Attaching
Coupler for Three Point Free
Link Hitch — SAE J909b**

**SAE STANDARD
LAST REVISED JUNE 1975**

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SOCIETY OF AUTOMOTIVE ENGINEERS, INC.

400 COMMONWEALTH DRIVE, WARRENDALE, PA. 15096



ATTACHMENT OF IMPLEMENTS TO AGRICULTURAL
WHEELED TRACTORS EQUIPPED WITH QUICK
ATTACHING COUPLER FOR THREE POINT FREE
LINK HITCH - SAE J909b

SAE Standard

Report of Tractor Technical Committee approved June 1966 and last revised June 1975. Conforms to report of FIEI Advisory Engineering Committee, Chicago, Illinois.

1. SCOPE

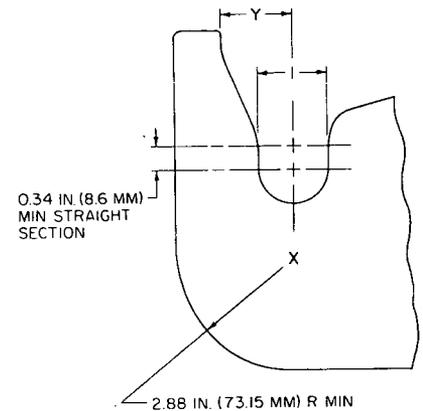
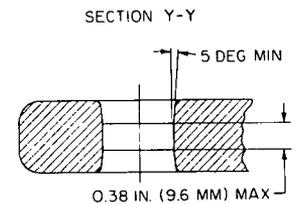
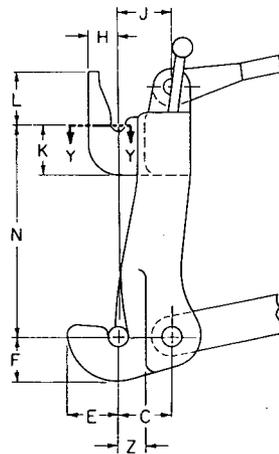
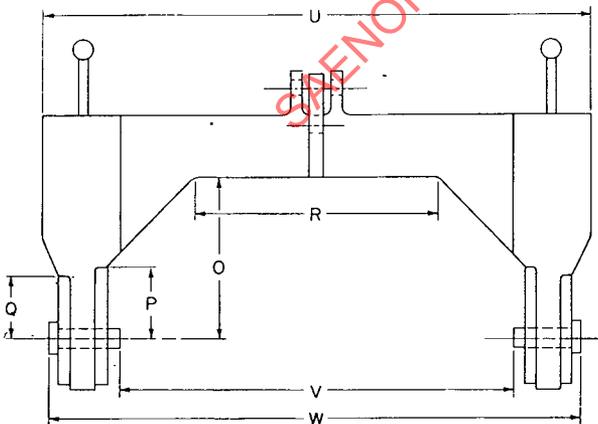
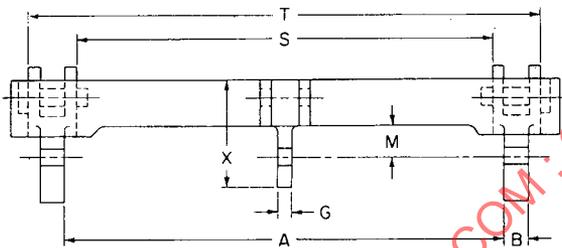
1.1 This specification sets forth the requirements for the attachment of standard three point hitch implements or equipment to the rear of agricultural wheeled tractors equipped with a standard three point free link hitch and quick attaching coupler. It does not provide for interchangeability between tractors and couplers.

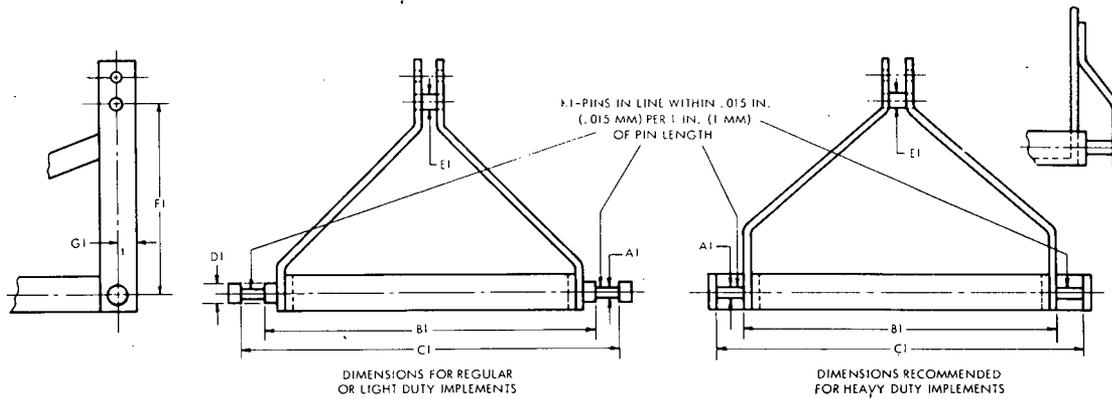
1.2 It is intended to establish those dimensions which are necessary to assure adequate clearance between components and to assure proper functioning of the tractor-implement combination when the implement is attached to the tractor hitch linkage by means of the quick attaching coupler and, in addition, to retain provision for attaching the implement directly

to the tractor hitch linkage when necessary or desirable.

1.3 In general, the dimensions associated with the tractor and the implement for use with the quick coupler are the same as those for the standard three-point free link hitch specified in ASAE Standard ASAE S217, Three-Point Free-Link Attachment for Hitching Implements to Agricultural Wheel Tractors. This standard sets forth only those additional requirements that are necessary to provide for use with the coupler.

1.4 Design of the latching mechanism and individual components of the coupler not restricted by this standard are left to the discretion of the quick attaching coupler manufacturer.





2. SPECIAL HITCH COUPLER CATEGORIES - It has been found from experience that certain large implements used with dual rear tires and narrow crop spacings require a special Category Narrow Hitch.

2.1 SPECIAL CATEGORY III NARROW HITCH COUPLER (III-N) - The dimensions of the Category III Narrow Hitch Quick-Attaching Coupler are as follows:

2.1.1 Table 1: Dimensions (A), (S), (T), (U), (V), and (W) shall be in accordance with Category II. All other dimensions shall be in accordance with Category III.

2.1.2 Table 2: Dimensions (B₁) and (C₁) shall be in accordance with Category II. All other dimensions shall be in accordance with Category III.

2.2 SPECIAL CATEGORY IV NARROW HITCH

COUPLER (IV-N) - The dimensions of the Category IV Narrow Hitch Quick-Attaching Coupler are:

2.2.1 Table 1: Dimensions (A), (S), (T), (V), and (W) shall be as follows:

- (A) 925 mm (36.42 in)/930 mm (36.61 in)
- (S) 858 mm (33.78 in)
- (T) 1174 mm (46.22 in)
- (V) 858 mm (33.78 in)
- (W) 1174 mm (46.22 in)

All other dimensions shall be in accordance with Category IV.

2.2.2 Table 2: Dimension (B₁) shall be 919 mm (36.18 in)/922 mm (36.30 in).

Dimension (C₁) shall be in accordance with CATEGORY III.

All other dimensions shall be in accordance with Category IV.

TABLE 1 - DIMENSIONS ASSOCIATED WITH QUICK-ATTACHING COUPLER (SEE FIG. 1)

Dimensions Designated in Fig. 1 (A, B, etc.)	Category I				Category II				Category III ^S				Category IV ^S			
	Millimeters		Inches		Millimeters		Inches		Millimeters		Inches		Millimeters		Inches	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
A Lower socket inside span	686.56	689.61	27.03	27.15	828.56	834.13	32.62	32.84	969.78	975.36	38.13	38.40	1171	1174	46.10	46.22
B Lower socket width	27.94	29.46	1.10	1.16	64.26	66.55	2.53	2.62	64.26	66.55	2.53	2.62	87	89	3.42	3.50
C Lower socket offset*	-	103.13	-	4.06	-	127	-	5.00	-	127	-	5.00	-	165	-	6.50
D Lower socket diameter	38.10	38.61	1.50	1.52	38.10	38.61	1.50	1.52	38.10	38.61	1.50	1.52	52	52.5	2.05	2.07
E Lower socket overhang	-	88.9	-	3.50	-	88.9	-	3.50	-	88.9	-	3.50	-	89	-	3.50
F Lower socket depth	-	88.9	-	3.50	-	88.9	-	3.50	-	88.9	-	3.50	-	127	-	5.00
G Upper hook width	-	31.75	-	1.25	-	31.75	-	1.25	-	31.75	-	1.25	-	45	-	1.77
H Upper hook overhang	-	73.15	-	2.88	-	73.15	-	2.88	-	73.15	-	2.88	-	82	-	3.23
I Upper hook opening	32.51	33.27	1.28	1.31	32.51	33.27	1.28	1.31	32.51	33.27	1.28	1.31	45.7	46.5	1.80	1.83
J Upper hook offset	-	103.13	-	4.06	-	127	-	5.00	-	127	-	5.00	-	165	-	6.50
K Upper hook depth	-	91.44	-	3.60	-	91.44	-	3.60	-	91.44	-	3.60	-	102	-	4.02
L Upper hook height	-	98.30	-	3.87	-	98.30	-	3.87	-	103.13	-	4.06	-	117	-	4.61
M Implement mast clearance#	41.15	-	1.62	-	41.15	-	1.62	-	41.15	-	1.62	-	54	-	2.13	-
N Upper hook vertical spacing	375.41	377.96	14.78	14.88	375.41	377.96	14.78	14.88	477.01	479.56	18.78	18.88	680	683	26.77	26.89
O Coupler frame height	283.21	-	11.15	-	283.21	-	11.15	-	384.81	-	15.15	-	508	-	20.00	-
P Coupler leg clearance height inside	203	-	8	-	203	-	8	-	203	-	8	-	330	-	13.00	-
Q Coupler leg clearance height outside	178	-	7	-	178	-	7	-	178	-	7	-	305	-	12.00	-
R Coupler frame clearance width	559	-	22	-	559	-	22	-	559	-	22	-	660	-	25.98	-
S Coupler frame inside width	657.10	-	25.87	-	796.81	-	31.37	-	931.68	-	36.68	-	1104	-	43.46	-
T Coupler frame lower outside width	-	806.46	-	31.75	-	1005.08	-	39.57	-	1130.30	-	44.50	-	(See footnote 1)	-	55.91
U Coupler frame upper outside width	-	879.61	-	34.63	-	1065.53	-	41.95	-	1158.75	-	45.62	-	1420	-	55.91
V Lower link attaching pin inside	620.8	-	24.44	-	762.0	-	30.00	-	903.2	-	35.56	-	1104	-	43.46	-
W Lower link attaching pin outside	-	828.12	-	32.60	-	1019.05	-	40.12	-	1174.75	-	46.25	-	1420	-	55.91
X Coupler frame overall span	-	222.25	-	8.75	-	222.25	-	8.75	-	222.25	-	8.75	-	305	-	12.01
Y Upper hook reach	47.75	-	1.88	-	47.75	-	1.88	-	47.75	-	1.88	-	63	-	2.48	-
Z Implement lower frame clearance #	41.15	-	1.62	-	41.15	-	1.62	-	41.15	-	1.62	-	54	-	2.13	-

* The upper hook offset (dimension J) shall be no more than 15.75 mm (0.62 in) greater or 6.35 mm (0.25 in) less than the lower socket offset (dimension C).

† The implement must provide clearance when attached to the coupler to permit lowering all elements of the coupler 120.9 mm (4.75 in) minimum for category I, II and III and 146 mm (5.75 in) minimum for category IV-N and IV, for satisfactory attachment and detachment of the implement from the coupler.

The upper hook on the quick coupler shall be on center of the lower sockets within 3.0 mm (0.12 in) and the upper hook opening on the implement shall be on center of the lower hitch pin shoulders within 3.0 mm (0.12 in).

Provisions shall be made for adequate upper hook clearance on those implements which require landing or leveling.

* The lower implement attaching point on the quick-attaching coupler shall be located in the vertical position such that the lift range, power range, and leveling adjustment, as specified in ASAE Standard ASAE S217, Three-Point Frp-Link Attachment for Hitching implements to Agricultural Wheel Tractors, are fulfilled.

Implement components, other than the hitch pins, that are in alignment with the lower socket width (dimension B) shall not extend forward of the centerline of the lower socket for a distance of 203 mm (8 in) above the lower socket.

Components above this height and extending laterally more than 281 mm (11 in) from the coupler centerline shall not extend more than 25 mm (1.0 in) forward of the vertical centerline through the upper hook opening.

The lower link socket width (B) shall be maintained within the area defined by dimensions P, Q, and Z.

§ See Section 2 for category IV-N or III-N narrow hitch dimensions.

in Lower link to coupler pins may be recessed to provide design freedom to obtain structural integrity in coupler frame, resulting in a common dimension of S and V, T and W respectively.